ANALOGY

IN THE

SEMITIC LANGUAGES

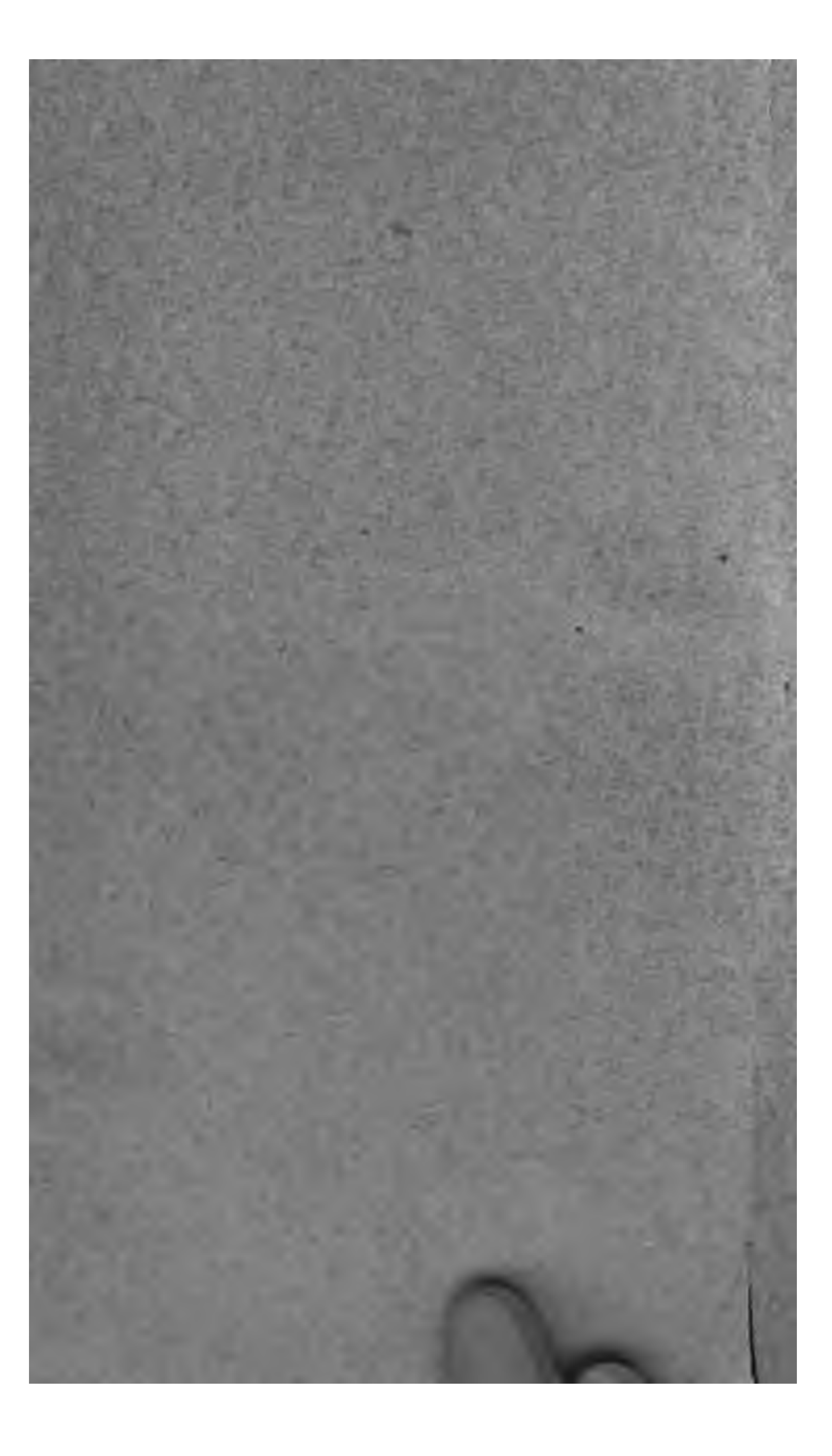
DISSERTATION

PRESENTED TO THE BOARD OF UNIVERSITY STUDIES OF THE JOHNS HOPKINS UNIVERSITY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

BY

ABEL H. HUIZINGA

BALTIMORE:
PRESS OF ISAAC FRIEDENWALD CO.
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PART I.

The received opinion on the nature of analogy as a linguistic phenomenon, and on the relation of analogy and phonetic law, may be stated as follows:[1]

1. The phonetic laws are absolutely without exception. There are not two classes of sound-changes, regular and irregular, systematic and sporadic.[2]

In speaking of phonetic law, however, it must be remembered that the idea of law is conditioned by the sphere in which it works and the material to which it is applied. We cannot speak of phonetic law in the same sense in which we speak of a natural law in physics or in chemistry. The student of linguistic phenomena should always take into account the individuality of the language-user.

2. Whatever cannot be explained by regular processes of phonetic law must, in the main, be due to the influence of analogy. Most, if not all, apparently irregular and exceptional forms which cannot be brought under any known phonetic law, or which seem to violate such laws, have been formed directly after the model of other forms without etymological consciousness, simply by the power of association.

These two forces, viz. phonetic variation and formation by analogy, are regarded as the most potent in bringing about individual instances of linguistic changes. Thus Sievers, in his article on Philology in the ninth edition of the Encyclopaedia Britannica, speaking of these two forces, says: "They generally work in turns and often in opposition to each other, the former frequently tending to the differentiation of earlier unities, and the latter to the abolition of earlier differences, especially to the restoration of conformity disturbed by phonetic change. Phonetic change affects exclusively the pronunciation of a language by substitut-

[1] See Misteli, Lautgesetz und Analogie, in Lazarus' und Steinthal's Zeitschrift für Völkerpsychologie und Sprachwissenschaft, XI 365–475.

[2] Cf., however, BAL 98 2, A. J. P., V 171.

ing one sound or sound-group for another. Analogical change is confined to the formation and inflection of single words or groups of words, and often has the appearance of being arbitrary and irregular. It is beyond our power to ascertain whence analogical changes may start, and to what extent they may be carried through when once begun. All we can do is carefully to classify the single cases that come under our observation, and in this way to investigate where such changes are especially apt to take place, and what is their general direction."

Starting with these general premises, it is the purpose of this article to study the operation of analogy in the Semitic languages, and to present, in a systematic way, the results of this study. In a study of this kind we are confronted by three questions:

1. What is the relation of analogy to the characteristics and structure of the languages in which it occurs? Are its nature, its manifestations, and the scope of its application at all modified or conditioned by the well-known peculiarities of these languages?

2. What individual instances of analogical formations are found in these languages?

3. How are they to be classified?

In conducting our investigations we may start from the well-known fact that the whole structure of language, in its grammatical forms and categories, is, in a sense, analogical. It exhibits the operation of what we may call *constructive analogy.*

The working of analogy as a constructive force in building up groups of similar words and forms may be stated as follows: It is obvious that different stems, forming different words and presenting different sounds and combinations of sounds, are used to express different ideas; and further, that different modifications of the same stem, whether by internal vowel changes, or by the addition of prefixes, infixes and suffixes, express the same idea under different modifications and relations. But that different words should undergo the same changes and receive the same additions in the form of prefixes or suffixes in order to express the same relation or modification of the original idea, is clearly the result of analogy whereby words are grouped together in classes, and within these groups the change which is applied to one is applied to all. This formation of groups or classes of words and inflectional forms, and the application of the same inflectional change (using this term in its widest sense) to every word belonging to the same group, are the result of analogy. Each group is governed by a prevailing

analogy, and each individual of the group is treated in its developments and its modifications to express different relations, in accordance with this prevailing analogy. The Semitic languages are peculiar in exhibiting with great clearness and fullness the effects of this constructive analogy by the regularity and uniformity of their structure. So, for example, in the inflection of the verb we find that the general analogy which is normally exhibited in the stems with strong and firm consonants holds good for all verbs, and the deviations from this model of the strong or regular verb are only modifications owing to the peculiar nature and feebleness of certain consonants. From the simple form of the primitives, called the *Qal* or first form, are formed according to an unvarying analogy in all verbs the verbal derivatives, sometimes called forms, or stems, or conjugations, each distinguished by a specific change or added element, with a corresponding definite change in its signification, such as intensive, causative, etc. In other languages where such formations exist they are usually regarded as new derivative verbs. But in the Semitic languages they are incomparably more regular than in the Indo-European languages.[1]

In these cases we have no reason to suppose that the present uniformity had to contend with original diversity. It may have been so, but the presumption is that it was not so. But the case is different when we consider another marked uniformity in the structure of these languages, viz. the fact that all inflectional stems have, or are assumed to have, three stem-consonants. As the languages have come down to us, we find a striking uniformity of appearance, but we have reason to suspect that it is at the expense of original divergency. In this case we have an instance of analogy partly as a disturbing and partly as a constructive influence. There are indications that the number of tri-consonantal stems was originally much smaller than at present, but in the course of linguistic development bi-consonantal stems were made tri-consonantal by the addition of another consonant until finally the latter formed the majority.[2] And although we have reason to suppose that the inflection of bi-consonantal stems was originally to some extent peculiar and different from the inflection

[1] See Kautzsch-Gesenius, Hebrew Grammar, 25th ed., Leipzig, 1889, §§39, 2 and 41.

[2] Cf. Lagarde, Symmicta, I 122 (Göttingen, 1877); Deutsche Schriften (1886), 285; Bildung der Nomina (1889), 215.

of tri-consonantal stems, yet the preponderance of tri-consonantal stems was so strong that even those bi-consonantal stems which remained for the most part gave up their individuality, in various ways assuming the appearance of tri-consonantal stems and conforming to their method of inflection.[1]

It may be assumed, then, as an established fact that the present uniformity in the appearance of the languages, namely, the predominance of tri-consonantal stems, is at the expense of original diversity. Still, even here, after the uniformity had once been established, analogy works as a constructive force in the further inflection of these stems.

But leaving for the present the consideration of analogy and the analogical structure of the Semitic languages in this sense of the term, let us examine the subject of analogy in its narrower, more specific sense, in the sense in which the word is generally used by recent writers, such as Misteli and Sievers; let us see what instances of such analogical formations we have in these languages, how they may be most conveniently classified, and how they are related to the fundamental structure and characteristics of these languages.

Whatever theory we may adopt as to the original form and constitution of the (so-called) weak verbs, this much at the least is certain, that in their present form they present the appearance of verbs regularly inflected after the model of the strong or perfect verb, modified, however, by the peculiarities of the weak consonants found in the stem. Add to this the fact that in some of the Semitic languages certain consonants (e. g. in Hebrew the gutturals) have certain peculiarities which give rise to corresponding peculiarities of inflection of the stems containing such consonants, and all the apparent irregularities of Semitic verb-inflection are accounted for. These different peculiarities give rise to different classes of verb-inflection, according to the ordinary denomination, verbs פ״י, פ״א, ל״ה, etc.

But knowing something of the nature of these weak consonants, something of the nature of the differences which distinguish these different classes of stems in their various formations and inflections on the one hand, and something of the nature of analogy as it is commonly understood, and as it is exhibited in

[1] Compare Whitney, Language and the Study of Language, p. 302 sq.; Stade, Lehrbuch der Hebräischen Grammatik, §12a, 1 and §142-144; Kautzsch, Grammatik des Biblisch-Aramäischen, §§45 and 46; Nöldeke, Syrische Grammatik, §§41 and 57.

other families of languages on the other hand, we are led to expect the occurrence of analogy just here. We are led to expect that the peculiarities which distinguish one class of weak verbs from another, the barriers, as we may call them, which separate the different classes from each other, should be entirely or partially disregarded and the different forms confused. And such we find to be the case. We have not only the general fact that all the inflection of those weak verbs which were originally bi-consonantal in their stems is analogical, i. e. based on the analogy of the stems with three stem-consonants, but we have also a great many specific cases of analogy. We find many individual instances of verbs of one class treated as if belonging to another class, and hence inflected after the analogy of that class, or even disregarding the weakness or peculiarity entirely and inflected directly after the analogy of the strong verb. We find also a few instances where the strong verb is inflected after the analogy of the weak. All such cases of analogical formation, therefore, which affect the real or assumed stem of any word comprise one class with three subdivisions.

CLASS I.

Analogical formations in the inflection of the verb or in the formation of verbal derivatives with reference to the different classes of stems.

Under this head we have three subdivisions:

A. Confusion of the different classes of weak stems.

B. Weak stems after the analogy of the strong.

C. Strong stems after the analogy of the weak.

This law of *tri-consonantality*, if we may so call it, in the stems of words, is one of the most prominent characteristics of the Semitic languages, and this class of analogical formations which has just been considered is closely connected with this same characteristic, in that stems which in their original form did not have three stem-consonants are conformed to the analogy of regular, original, tri-consonantal stems.

Another peculiarity of the Semitic languages is the function of the vowel and the use made of differences and changes in vocalization to differentiate various classes of words and to construct different inflectional forms. Thus, in Arabic, *qatala* is the type of the active transitive verb, *qatila* of the intransitive, and *qutila* of the passive.[1]

[1] Cf. Lagarde, Bildung der Nomina, p. 7 (ZDMG XLIV 536).

We have also many phonetic processes whereby vowels are changed, lengthened, shortened, etc., in the various processes of inflection. These changes and variations are so light and delicate that we may expect some confusion at times, and such we find to be the case. Sometimes these phonetic processes are firmly maintained, enabling us to ascertain the law which governs them. But in a great many cases forms are transferred from one class to another, and changes take place which are not warranted by any phonetic law. All these analogical formations connected with the vocalization of the different words and forms can be comprised in one class. This gives us

CLASS II.

Analogical formations involving changes and confusion in vocalization.

Still another peculiarity of the Semitic languages is their method of inflection and of the formation of derivative words by preformatives, informatives, and afformatives, and the resulting distinction between servile and stem-consonant. These formations and distinctions are peculiarly subject to confusion, and hence give rise to many analogical formations which may be comprised in one class with four divisions.

CLASS III.

Analogical changes in the formative elements of words.

A. Mistaking servile or formative element for part of the stem.

B. Mistaking a stem-consonant for a servile.

C. Analogical changes in the formative elements themselves; influence of one formative element upon another.

D. Addition of serviles and formative elements where they do not belong.

I have thus shown, in a preliminary and provisional way, the possibility of the existence of three different classes of analogical formations affecting respectively the stem-consonants, the vowels, and the formative elements of the different words and forms. But when we consider that every Semitic word can be analyzed into these three elements, viz. its consonantal stem, its vowels, and its formatives, and that these three elements are in the main so strongly marked and so clearly separated, we see at once that this analysis has furnished us a basis for the classification of analogical formations which, though perhaps not so profoundly philosophical as some other modes of classification which might be

adopted, still has the merit that it is simple, practically convenient, and exhaustive, and most of all, that it presents these analogical phenomena in closest connection with the structure and the characteristics of these languages.

The results of our study up to this point may be summed up in the following propositions:

1. The whole structure of the Semitic languages and all the formations and inflections of words are analogical, using the term analogy in its widest sense.

2. Using the term analogy in its restricted and more usual sense when speaking of it as a linguistic phenomenon, those cases of analogical formation which do occur are connected most closely with the structure and various characteristics of these languages, and *thus they are easily accounted for, in fact they occur just where this structure and these characteristics lead us to expect them.*

We find, then, these two factors in the structure of the Semitic languages: on the one hand a notable degree of regularity in the recurrence of certain fixed types of forms and in the application of inflectional modifications; on the other hand, certain deviations from these types and normal processes under the influence of a disturbing analogy. But when we look more closely into the nature and relations of these two factors it becomes evident at once that they sustain a most intimate relation to each other. They are not the result of separate and distinct linguistic forces, or to go back of the language to the mind of the language-user, of separate and distinct faculties of the mind. They are the result of the same law working under different conditions. As a linguistic law we call it *the law of the group.* As the product of the human mind we ascribe it to *the power of association.* By the constitution of the human mind each word is felt to be a member of a distinct class or group, and not simply an isolated individual; and the whole philosophy of analogy as a linguistic phenomenon may be thus briefly expressed:

Whenever the law or type of any group has been able to maintain itself, the individual conforms to the law of the group to which it belongs and the formations are normal.

But when the law breaks down and the distinction between the groups is disregarded, the individual, instead of conforming to the group to which it belongs, is transferred to another group, with which somehow it has become associated, and the result is a disturbing analogy.



It is true that the unwarranted application or extension of analogy beyond its legitimate bounds is a marked feature of language. It is this that has given rise to the expression ***mistaken*** or *false* analogy. It might better be called disturbing analogy. One of its most frequent effects, as is pointed out in the words of Sievers, quoted above, is the obliteration of existing differences. But it is wrong to regard analogy simply as a disturbing influence. In fact, we might almost say that this is only an incidental effect. It is better to regard analogy as that which binds together the different individual members of each group of words or linguistic elements. Or to speak more accurately, it is natural for the mind to associate words which although different still are felt to be members of one and the same group, and to apply to all the inflectional changes which it has been taught to apply to one. This extension of the same inflectional changes to all the different members of the same group, this formation of different words from different stems after the same type or model, is not the work of memory, as is also pointed out by Brugmann in his book "Zum heutigen Stand der Sprachwissenschaft," p. 79. It is the work of the power of association or combination, or, as it might also be called, the analogical faculty. We are not concerned primarily with the name of this faculty, however. But that with which we are concerned is the fact that so-called analogical formations are not to be regarded as something isolated and entirely distinct from those formations which are called normal, but rather they are the results of the same mental process, and show the operation of the same law working under different conditions.

Starting from the principle that analogy is the modification of an existing form, or the origination of a new form after the model of another form with which it is associated, different schemes for the classification of such analogical phenomena have been proposed. These different schemes are presented and reviewed by Delbrück, " Einleitung in das Sprachstudium," p. 108 fg. According to him these classifications are made from three different points of view:

1. According to the nature of the psychological activities which are concerned in the different formations.

2. According to the nature of the words affected by analogy.

3. According to the results of the operation of this force of analogy.

The first of these principles is the one adopted by Misteli in



the article already referred to (Zeitschrift für Völkerpsychologie und Sprachwissenschaft, XI 365–475, XII 1–26), and after him by Wheeler, in his treatise on "Analogy and the scope of its application in language."[1] As this is by far the most satisfactory of existing methods of classification, I shall present it in some detail, using mainly the phraseology of Wheeler in the statement of the different classes, and illustrating them by examples taken from the domain of Semitic.

According to Sievers, the influence of analogy tends largely to the abolition of earlier differences. Similarly Wheeler (op. cit. p. 35): "The operation of analogy in language is in every case ultimately conditioned and determined by the natural quest of the mind for unity to replace multiplicity, system to replace anomalous diversity, and groups to replace monads. The office of the psychical factor in the development of language is therefore the maintenance and re-establishment of the groups which the phonetic laws tend to disrupt, and the creation of new groups. It aims to eliminate purposeless variety."

To this must be added the important statement on page 37 of the same work: "The formation of new groups very commonly appears as a readjustment of old groups. Changes in the character and use of the phonetic material of a language often cause a form or number of forms to be severed from one group and attached to another."

Wheeler thus classifies the phenomena of analogy:

I. *Likeness of Signification and Diversity of Form.* Two words entirely diverse in form, but which are capable of application to one and the same object or idea, may, through the influence of this limited likeness of signification, be confused into one word by the process known as "contamination of form."

No instance of this kind in Semitic has occurred to me.

II. *Affinity of Signification and Diversity of Form.* Words totally dissimilar in form, but expressing ideas of like category, are made to approximate slightly in form through the extended application of some sign of category or through the extended use of some element or combination of elements of sound which has come to be recognized as characteristic of a group.

As an illustration of this kind of analogy the following has occurred to me: The common people often say *masoner* for *mason.* The ending *er* came to be regarded as expressing trade or calling,

[1] Ithaca, N. Y., 1887. Cf. also A. J. P. V 165–85, X 202.

from such words as *painter*, *joiner*, *carpenter*, *farmer*, etc. Hence they sought to bring *mason* into the same category of form by adding *er* and making *masoner*.

Instances in Semitic are the following among others: The prefix *m*, to form the passive participle of the Arabic first form, of which the ground-form is *qătûl*. See Barth, Nominalbildung, p. 178, §123*a*.[1]

In Arabic this principle often works in the extension of existing groups. See Barth, Nominalbildung, p. 135, §85*d*. The form *qatîl*, formed nominally from the *i*- imperfect, is used to denote masses, collectives. Then in that sense it is formed from stems which have no *i*- imperfect, especially to denote masses or collections of animals, *kalîb* 'dogs,' *ḍa'în* 'sheep,' etc.

Cf. also the Mandean pronouns *ächnun*, *ächtun*, *ächtôchun* and *ächnôchun* (Nöld., Mand. Gramm., p. 86).

III. *Likeness of Function and Diversity of Form.* Words differing in form are reduced to groups upon the basis of likeness of function, i. e. of likeness of use in the economy of the sentence and for the expression of like modifications of thought.

An illustration of this kind of analogy is found in the formation of the Hebrew infinitive absolute of the Niphal. See Barth, op. cit. p. 72, §49*b*. The regular infinitive absolute of the Niphal is seen in נִכְסֹף. But as in the Piel and Hiphil a certain assonance was perceived between the imperfect and the infinitive absolute used to strengthen it, e. g. שַׁבֵּר תְּשַׁבֵּר, Ex. 23, 24, a similar form was originated in order to produce a similar assonance in the case of the Niphal הִמָּלֵט אִמָּלֵט, הִכָּרֵת תִּכָּרֵת, I Sam. 27, 1, etc. This analogical formation almost entirely displaced the organic.

Other illustrations of this are seen in the formation of prepositions with suffixes in Hebrew and in Ethiopic. Compare אֵלֶיךָ, עָדֶיךָ, אַחֲרֶיךָ, תַּחְתֶּיךָ.[2]

The י is organic in the first two cases, because they are to be referred to the stems אלי and עדי. Starting from such stems it is extended analogically to stems of other prepositions where it has no place at all.

IV. *Contrast of Signification and Partial Likeness of Form.* Words of contrasted signification and of partly similar form are grouped in couplets, and a further approximation in the outward form is the result.

[1] Cf., however, Beitr. z. Assyriologie I 160 (ZA, IV 375).

[2] Cf. ZDMG, XLII part 3 (A. J. P. X 234) and Lagarde, Mittheil. II 231.

An instance of this kind of analogy is given by Praetorius, Ethiopic Grammar, p. 86, §99. Eth. *waḍ'a, he has gone out,* has in the subjunctive *iḍâ'*, and imperative *ḍâ'*. These forms ought to be inflected thus: *teḍě'î, iḍě'û* or *ḍě'î, ḍě'û*. They follow, however, the analogy of their opposite *ibâ'*, from *bô'a, he has gone in,* and hence we have the forms *teḍâ'î, iḍâ'û, iḍâ'â*, etc.[1]

Another illustration of the analogy of the opposites is the Hebrew קִיצוֹן, *last* (stem קצץ) after the analogy of רִאשׁוֹן, *first.*

V. *Likeness of Signification and Partial Likeness of Form.* Words whose stems have a like signification and are similar but not like in form are grouped together upon the basis both of meaning and form, and a levelling of the form of the stems is the result.

Under this head Wheeler brings the following classes of analogical formations:

A. Levelling between different cases of like stems.

As an instance, somewhat similar at least to the instances mentioned by Wheeler under this head, may be mentioned such cases as I have given under Cl. III, Div. B., the Assyrian plural *ilâti* for *idâti*, from *ittu*, which stands for *idtu*,[2] the feminine of *idu, hand.*

B. Levelling between the different forms for person and number in the same tense of the verb.

Analogical influence of this kind is very conspicuous in the inflection of the perfect of the Semitic verb.

The original paradigm probably was as follows, in the singular:[3]

qatal a. 'he has killed.'
qatal at. 'she has killed.'
qatal tâ. 'thou hast killed.'
qatal tî. 'thou (fem.) hast killed.'
qatal kû. 'I have killed.'

In Ethiopic, the first person *qatal-kû* has influenced the second person masculine and feminine, so that they now have *qatalkă, qatalkî*. In the other languages the reverse of this process took place; *kû* of the first person was changed to *tû* under the influence of the analogy of the second person, while in Hebrew, by a further analogical change, *tû* was changed to *tî* under the influence of the possessive suffix *i.*[4]

[1] Cf. Hebraica II 6, i.

[2] See Hebraica I 178, 5; cf., however, Delitzsch, Prolegomena 46 and 115.

[3] See Nöldeke, Die Endungen des Perfects, ZDMG, XXXVIII 407 sq.

[4] Cf. SFG 53 below; ZDMG, XXXVIII 419; XLIV 539, 1; Wright, Comp. Gramm. 175.

C. Levelling between the different parts (tenses), etc., of the same verb.

An instance of this kind of analogical formation is seen in the vocalization of the Hebrew perfect and imperfect *Piel* as compared with the corresponding forms in Arabic. In Arabic, which probably comes nearest to the primitive, we have *qattala*, *yuqattilu*, while in Hebrew we have קִטֵּל, יְקַטֵּל. The *e*-vowel of the second syllable of the perfect is probably due to the influence of the corresponding vowel of the imperfect. The *i*-vowel of the first syllable is then perhaps due to vowel-harmony.

D. Levelling between derivative and primitive.

No instances of this kind in Semitic have occurred to me, perhaps because there generally exists such a close connection between derivative and primitive.

For this classification Wheeler claims practical exhaustiveness. He says: "Under the five main categories which have been thus far established and discussed may be classified nearly if not quite all the phenomena usually associated with the action of analogy."

I have preferred, however, in my treatment of analogy to look at the phenomena from a different point of view, and adopt a different method of classification. The predominant characteristic of all Semitic analogical formations, as I have already shown, *is the formation of groups, and the disturbance of these groups* by transferring individual words, forms, portions, or characteristic elements of forms from one group to another, taking them from a group where they exist organically and applying them to or placing them in a group where they do not belong. These disturbances or transferments will naturally affect either the consonantal ground-stem of a word, or the vocalization of the stem, or those formative elements, prefixes, infixes, suffixes, by which different inflectional forms or derivative words are formed. Hence the classification which I have given will logically follow, and I trust that a study of the material as I have arranged it, in the second part, under these different heads, will bear out its suitability. This material will appear in a subsequent number of this Journal.

PART II.

The following are the principal instances of analogical formation in the Semitic languages.

Class I.

Analogical formations in the inflection of the verb, or in the formation of verbal derivatives with reference to the different classes of verb-stems.

In this class are comprised only such cases as have reference to the different classes of verb-stems. All other cases are placed under their proper heads (Classes II and III).

Division A.

Confusion of the different classes of stems, either in the inflection of the verb or in the formation of verbal derivatives.

In Hebrew the two classes of verbs ל״ה and ל״א are frequently confounded. Sometimes, however, this confusion is due simply to the Massoretic pointing.

ל״ה after the analogy of ל״א.

שִׁנָּא 2 Kings 25. 29 'he changed' for שִׁנָּה. So also from the same stem יִשְׁנֶא Lam. 4. 1 and יְשֻׁנֶּא Ecc. 8. 1.

יַפְרִיא 'he is fruitful' Hos. 13. 15, st. פרה.

כַּלֵּא 'to consume' Dan. 9. 24 for כַּלֵּה (inf. constr. Piel).

מְרַפֵּא Jer. 38. 4 'relaxing' for מרפה (prtcp. Piel).

מֹרְאָה for מֹרָה Zeph. 3. 1 'rebellious' (prtcp. Qal), st. מרה.

מְסֻלָּאִים Lam. 4. 2 'weighed' as if from סלא.

תְּלֻאִים Deut. 28. 66 'hanging' pass. prtcpl. Qal as if from תלא. So also תְּלָאוּם 2 Sam. 21. 12 קרי.

וַיֶּחֱלֶא 2 Chron. 16. 12 'and he was sick' for ויחלה.

וַיְחַפְּאוּ 2 Kings 17. 9 'and they covered' as if from a stem חפא, for חפה.

וַיַּדַּא 2 Kings 17. 21 כתיב 'and he removed' as if from נדא, for וַיַּד from נדה.

אַל־תֹּבֵא Prov. 1. 10 'be not willing' as if from a stem אבא for אבה.

לִירוֹא 2 Chron. 26. 15 'to shoot' as if from a stem ירא for ירה, similarly 2 Sam. 11. 24 and Prov. 11. 25.

ל״א verbs after the analogy of ל״ה verbs.

Several forms from כָּלָא 'to withhold,' 'to restrain,' are formed as if from a stem כלה, so כָּלָאתִי Ps. 119. 101 (this, however, may be simply due to the Massorites), כְּלִתִנִי 1 Sam. 25. 33, כָּלוּ 1 Sam. 6. 10, יִכְלֶה Gen. 23. 6.

So also many forms from רָפָא 'to heal' are formed as if from רָפָה, as רְפָה Ps. 60. 4. Imperative Qal with vowels as if from רפא.

תִּרְפֶּינָה Job 5. 18 'they heal.'

נִרְפָּתָה Jer. 51. 9. יֵרָפוּ 2 Kgs. 2. 22. Perfect and imperfect Niphal. יְרַפּוּ Jer. 8. 11. Piel.

So also בּוֹטֶה Prov. 12. 18 'babbler' from stem בטא (cf. מִבְטָא).

צָמִת Ruth 2. 9 from צָמֵא 'to thirst.'

מָלוּ Ezek. 28. 16 and יְמַלֶּה Job 8. 21 from מָלֵא 'to be full' as if the stem were מלה.

Compare also such infinitive forms as קְרִיאוֹת Jud. 8. 1 from קרא 'to call.'

מְלֹאת Numb. 6. 5 from מָלֵא 'to be full,' also מְלֹאות Jer. 25. 12, מַלֹּאת Ex. 31. 5.

שְׂנֹאת Prov. 8. 13 from שָׂנֵא 'to hate.'

חֲטֹאת Ez. 33. 12 from חָטָא 'to sin,' קַנֹּאת 2 Sam. 21. 2 from קִנֵּא 'to be jealous.'

These forms as compared with מְצֹא, etc., clearly show the influence of the analogy of גְּלוֹת.

The example of חֲטֹאת, moreover, leads us to suspect that in חוֹטֶא Is. 65. 20, חֹטֶא Ecc. 8. 12, and in other similar cases we have something more than a "confusion due to the Massorites."[1]

נִפְלֵיתִי Ps. 139. 14 and נִפְלִינוּ Ex. 33. 16 are from פלא to separate, distinguish,' as if the stem were פלה.

נִטְמִינוּ Job 18. 3 from טָמֵא 'to be unclean' as if the stem were טמה.

So הִמְצִיתִךָ 2 Sam. 3. 8 from מָצָא 'to find' as if the stem were מצה.

[1] It is well known that the verbs ל״א are in the Mishna regularly inflected as verbs ל״ה; see Geiger, Lehrb. zur Sprache der Mishna, p. 46; Strack-Siegfried, Lehrb. der neuhebr. Sprache (1884), §§98c and 105; cf. Wright, Koheleth (1883), p. 488.

נֶחְבָּה Jer. 49. 10 from חָבָא 'to hide' as if the stem were חבה, also הֶחָבֶה 1 Kgs. 22. 25. So also נִבֵּיתָ Jer. 26. 9 and הִנָּבְאֹתוֹ Zech. 13. 4 from נִבָּא 'vaticinatus est' as if the stem were נבה (for נבו).

Similarly הִתְנַבּוֹת 1 Sam. 10. 13 and הִתְנַבִּיתָ 1 Sam. 10. 6.

Again, a similar confusion is observed between ע״ע stems and ע״ו stems.

The following forms from ע״ע stems are formed as if from a stem ע״ו:

יָרוֹן Prov. 29. 6 'he will sing' (st. רנן).

יָרוּץ Is. 42. 4 'he shall be bruised' (stem רצץ). [Cf. Eccl. 12. 6.]

יָשׁוּד Ps. 91. 6 'he shall waste' (st. שדד).

בּוּר Ecc. 9. 1 'to explore' (st. ברר).

נגוזו Nah. 1. 12 'they shall be cut down' (st. גזז).

תִּבּוֹז Is. 24. 3 'she shall be plundered' (st. בזז).

תִּבּוֹק Is. 24. 3 'she shall be emptied' (st. בקק).

יְמִישׁוּן Ps. 115. 7 'they handle' (st. משש).

מֵסִיךְ Jud. 3. 24 'covering' (st. סכך).

תֵּעוֹר Hab. 3. 9 'she was made bare' (st. ערר).

יְחִיתַן Hab. 2. 17 'it terrifies them' (st. חתת).

יֵרוֹעַ Prov. 11. 15 'he shall be broken' (st. רעע).

So also in Syriac these two classes of verb-stems, viz. ע״ע and ע״ו are frequently confused. See Nöldeke's Syriac Grammar, §§ 58, 105, 126B, 174E, 175, 176, 177A for these and similar instances in Syriac.

The following forms from ע״ו stems are formed as if their stem were ע״ע.

שֹׁב Josh. 2. 16, inf. of שׁוּב 'to return'; נָמַר Jer. 48. 11, Pause, 'he is changed,' st. מוּר; and יָמֵר Ezek. 48. 14, Hiph. from the same stem.

In Syriac all the verbs ע״ע form their forms with prefixes after the analogy of verbs פ״ן. See Nöldeke, Syriac Grammar, §178C.

This is also the explanation of all those forms with prefixes from verbs ע״ע in Hebrew, in which the first stem-consonant is doubled. They are based on the analogy of verbs פ״ן.

Instances are יִדֹּם from דמם 'to be silent.'

יִקֹּד stem קדד 'to bow the knee.'

יִתֹּם stem תמם 'to finish.'

יִדַּל stem דלל 'to be slack, feeble.'

יִשַּׁח stem שׁחח 'to be low.'

יִמַּךְ stem מכך 'to tumble, fall.'

יִסֹּב stem סבב 'to turn' and יָסֵב, Hiphil from the same stem.

The same formation is observed in the case of some forms from ע"ו stems.

יִסֹּג stem סוג 'to draw back, depart.'

יִמֹּל stem מול 'to cut off.'

הִזִּיל Hiphil stem זול 'to shake.'

יַסִּית Hiphil stem סות 'to move.'

יֻטַּל Hoph. stem טול 'to be long.'

הִנִּיחַ and יַנִּיחַ 'to lay down,' 'to cause to rest' Hiph. stem נוח.

According to Stade, §535b, the form תְּסֻבֶּינָה, impft. 3d person fem. plur. stem סבב 'to turn,' with the insertion of the diphthong *ai* (ֶי) between the stem and the ending, rests on the analogy of the same form from stems ל"ה (for ל"י or ל"ו) תִּגְלֶינָה.

In Mandean (Nöldeke, Mandean Grammar, page 83) and in Amharic (Praetorius, Amharische Sprache, p. 141) confusion between stems ע"ע and ל"י and ל"ו is especially frequent. The examples are all given in the places cited, so that it is needless to give them here.

According to Praetorius (loc. cit.), this is also the explanation of the form סַבּוֹתָ, i. e. the stem סבב is treated as if it were סבה for סבו (sabawa). On סַבּוֹתָ see also Wright, Arab. Gramm. §120 rem. c. and Spitta, Dialect of Cairo, §101, 3.

Sometimes stems פ"ו and פ"י are confused. As is well known, many of the stems פ"י in Hebrew are originally פ"ו, the original initial *waw* reappearing in the Niphal, Hiphil, and in verbal derivatives with מ-preformative. Not all such formations with *waw* are organic, however. Thus, as is pointed out by Haupt (S. F. G. p. 22, note 1) the verb יָדַע 'to know' is a verb *cum yódh originario*, as appears from the Assyrian *îdî*, *îtdî*, and Ethiopic *'ăydĕ'a notum fecit.* Hence the Hiphil הוֹדִיעַ, Syriac *'awdă'* and *shawda'* are analogical formations.

Some forms from stems ע"ע show the influence of פ"י analogy to which they bear an external resemblance.

So יֵצְרוּ Job 18. 7, impft. stem צרר 'to be narrow.'

The verb הָלַךְ 'to go' has the impft. Qal. יֵלֵךְ and Hiph. הוֹלִיךְ as if the stem were ולך, while the form אֵילְכָה Mic. 1. 8 points to a form ילך *cum* י *originario.*

So also the form יֵיטַב, impft. from טוב 'to be good,' as if the stem were יטב.

In Assyrian the stems פ"ו, פ"א and פ"ה (פא$_2$) are also confused. Thus *ušêbila*, *ušêšib*, *ušêṣi* from stems פ"ו are formed as if from stems פ"א.

So also *attašab*, *ittaṣûni*, *muttabil* are formed after the analogy of *attalak*, etc., and this again shows the influence of stems פ"ן. *izzazû*, present of *nazâzu* 'to stand,' is based in its vocalization on the analogy of *'illakû* from *'alâku* 'to go.' See Haupt, S. F. G., p. 52, note 10.

So also *iddan* stem *nadânu* 'to give,' by the same analogy. *illika* 'he came' is פ"ן analogy. See Haupt, S. F. G., p. 66, also Hebraica, Vol. I, p. 255.

So also the stems וקר and ורק form their preterites as if from יקר and ירק, *ê-qir*, *li-ri-qu* (Del. Ass. Gram. §112).

Dr. Rosenberg, Das Aramäische Verbum im Babylonischen Talmud, gives the following instances of transfer from one weak class to another in that idiom.

P. 40. מיתצר (יצר) 'er ward gebildet' Joma 85a, Sota 45b analogy of ע"ו.

P. 44. Most verbs ע"ו form their Afel after the analogy of verbs פו.

P. 45. Verbs ע"ע with object-suffixes are sometimes treated after the analogy of ל"ו.

P. 46. Ethpeel of verbs ע"ע, formed, partially at least, after the analogy of verbs ע"ו. So עלל forms its *Pael* and *Ethpaal* after the analogy of verbs ע"ו.

P. 63. Verbs ל"י form with pronominal suffixes after the analogy of the strong verb (cf. Nöld. Mand. Gram. §204).

In modern Syriac פִּיְחָא, fem. פָּחתא 'lukewarm,' whose stem is really פוח, is based on the analogy of קירא 'cold,' חימא 'warm' (Nöld. Neusyrische Sprache, §43).

Further, שמעיא 'heard' and מרעיא 'sick' are formed after the analogy of other ל"י forms, such as דכיא 'pure,' חזיא 'seen,' etc. (Nöld. Neus. S. §44, p. 91).

Cases of analogical formation in the confusion of different classes of weak verbs are specially frequent in modern Syriac. See Nöld. Modern Syriac Grammar, p. 188, §95.

Verbs פ"י and ע"ו are confused. See Nöld. op. cit., p. 228, §108, p. 230.

Verbs פ"א, such as אסק 'to ascend,' אסר 'to catch, to be cold,' are treated after the analogy of verbs פ"י.

Many verbs originally ע"ע are treated after the analogy of verbs ע"ו, e. g. כיפא, כאף 'to bend, stoop' from כפף, תאם, חימא, etc. 'to finish' from חמם (Nöld. Neusyr. Sprache, p. 231, §109).

טאב 'to be worth' has some forms from טבא (ל"י).

ראק 'to spit' has in the inf. בארקא after the analogy of פ"א (Nöld. §110, p. 233).

ל"ע and ל"י are confused (p. 239, §111). See also p. 248, §114.

The verb יהב (p. 254, §117) forms its conjugation from several different though correlated stems.

There are many instances of such confusion of the different classes of weak verbs in Mandean. The instances are too numerous to be mentioned here in detail. See Nöld. Mandean Grammar, p. 24, §22.

Verbs tertiae ע after the analogy of verbs tertiae י.

P. 82, §74. Verbs ע"ו after the analogy of ע"ע and conversely ע"ע after the analogy of ע"י.

Verbs mediae א and ע after the analogy of עו.

Verbs ל"י after the analogy of ע"ע, and so conversely verbs ע"ע after the analogy of verbs ל"י.

Nominal formations from different stems showing the influence of ל"י stems are given on p. 104, §90.

P. 111, §94. (Mand.) forms from ל"י, ל"ו treated after the analogy of forms from stems ע"ע.

P. 236, §177a. Verbs *tertiae gutturalis* after the analogy of stems ל"ו.

P. 243, §180. Verbs פ"א are treated after the analogy of verbs פ"י, פ"ו

Verbs ע"ו and ע"ע are habitually confounded (Mand. Gram. p. 247, §183).

So p. 255, §189. Verbs *mediae* ע or א are treated after the analogy of verbs ע"ו.

Cases of the influence of one class of weak stems upon another in Amharic are given in Praetorius, Amharische Sprache (Halle, 1879), p. 141, §103. As they are all fully cited there and discussed at some length, it is needless to mention them here in detail.

Other cases of the confusion of different weak stems in Arabic are given by Barth, Nominalbildung, p. 45, §30b.

The adjective-form *qătîl* from stems ע"ו, preserves the *w* in a few cases such as *ṭawîl* 'long,' *ḥawîd̲* 'zealous.' But in most cases they follow the analogy of stems ע"י, with the usual change of *ăjê* to *ăjjî* (*aịịi*). Examples are *maịịit* 'dead,' *'aịịid*, *jaịịid* 'good,' *haịịin* 'light, easy.'

Other instances are given p. 188, §127c, *qaịịim*, *ḥaịịiṭ*, *saịịid*.

Class I.

Division B.

Stems with weak stem-consonants after the analogy of stems with strong stem-consonants. Also original bi-consonantal stems after the analogy of tri-consonantal stems.

As was pointed out in the first part of this article, many stems in the Semitic languages which seem to have three stem-consonants were probably bi-consonantal in their original condition, and assumed an additional stem-consonant in order to make them tri-consonantal by the force of the prevailing analogy. Other stems, instead of becoming completely tri-consonantal remained more or less imperfect and preserved some traces of the original bi-consonantal condition. In different languages also they attained to different stages of completeness. Thus, from the original bi-consonantal stem קם we have in Hebrew קוּם and קָם (with a long vowel), and in Arabic *qâma*. The Hebrew intensive is קוֹמֵם, and the Arabic *qauuama*, and Aramaic קַיֵּם (לְקַיָּמָה Dan. 6. 8). Here it will be seen that the original bi-consonantal stem is more conspicuous in Hebrew, and the form of the tri-consonantal stem is more completely attained in Arabic and in Aramaic, *qauuama* standing on exactly the same plane as *qattala.*

Finally, taking the inflection as it now stands, where the peculiarity or feebleness of one or more of the stem-consonants, or the originally bi-consonantal nature of the stem gives rise to different classes of verbs, each with its own special paradigm (according to the current denomination פ״י, פ״ן, ע״ע, ל״ה, etc.), we find many individual cases which, disregarding these peculiarities, leave the paradigm to which they ought normally to conform and follow the analogy of the strong or perfect verb throughout.

We find, then, that we can distinguish three closely related cases:

(1). Stems in which all traces of the original bi-consonantal nature have disappeared, and which have three stem-consonants in all of their forms.

(2). Stems in which the analogy of the tri-consonantal stems is established as part of the regular paradigm in some of the forms.

Here we find such cases as the Arabic *qauuama* from *qâma*, Aramaic לְקַיָּמָה from קָם.

Compare also Nöldeke, Modern Syriac Gramm. §42, where it

is observed that those nouns which in the earlier language were bi-consonantal, such as *dim* 'blood' and *shim* 'name,' have become tri-consonantal in modern Syriac, *dimmâ* and *shimmâ*.

Under this head may also be placed the forms treated by Barth, Vergleichende Studien, Z. D. M. G., Vol. 41, p. 603 fg.

Because of the reluctance of the Semitic languages to have nouns with only two stem-consonants, masculine nouns of this class of forms of which he is treating (viz. shortened derivatives of stems ל״ו and ל״י) are but seldom found in the northern Semitic languages, and in Arabic hardly ever. In consequence of the prevalence of the law requiring *three* stem-consonants, the greater number of such shortened nouns assumed the feminine ending, not to denote sex, but simply to compensate the loss sustained by the disappearance of the third stem-consonant. Cf. Hebrew שֶׁקֶת 'drink' from the stem שׁקה, גְּוִיָּה 'body.' In Arabic *ḥize* from the stem *ḥaziẓa* 'to obtain' and many others.

So also the "feminine ending" is added in those cases where the *first* stem-consonant has disappeared. לֶדֶת and Arabic *lidatu*ⁿ from the stem ולד (*walada*), ילד 'to bear.' This "feminine ending" has become so entirely a part of the stem as to remain in the plural. Compare דְּלָתוֹת 'doors,' קְשָׁתוֹת 'bows,' שְׁקָתוֹת 'watering-troughs,' כְּסָתוֹת Ez. 13. 18 'bands, pillows.'

(3). Individual cases of single forms where the normal paradigm or type of the class to which the stem belongs is disregarded and the form is based directly on the analogy of the strong or regular verb.

In אָיַבְתִּי Ex. 23. 22 'I was an enemy' and in עָיֵף 'weary,' we evidently have a later development of a consonantal *yodh* between the two original consonants of the stem.[1]

With regard to עָיֵף, however, we must note that Barth, Nominalbildung, §10b, regards it as transposed for יָעֵף.

The assimilation of a vowelless נ is a familiar fact in Hebrew morphology. In cases where it is retained, the analogy of other consonants not subject to such assimilation doubtless has its influence. So תִּנְגֹּשׂוּ Is. 58. 3 'ye exact,' יִנְטוֹר Jer. 3. 5 'He will keep,' יִנְצֹרוּ Deut. 33. 9 'They will guard,' יִנְקָב Job 40. 24 from נָקַב 'to bore through,' יִנְקֹפוּ Is. 29. 1 from נקף 'to come round,' said of feasts.

[1] Cf. Haupt, Zeitschrift für Assyriologie II 276, and Beiträge zur Assyriologie I 296 below.

לְהַנְתִּיךְ Ezek. 22. 20 'to melt,' Hiph. inf. of נָתַךְ.

הָנְתַּק Jud. 20. 31 Hophal from נָתַק 'to cut off.'

In Assyrian *n* is not assimilated to the following dentals: *ênzu* 'goat,' *bintu* 'daughter,' *enšu* 'weak.' See Haupt in Hebraica I 227.

In עִוֵּד Ps. 119. 61 'to surround' Piel of עוּד; עִוֵּר 'to make blind,' קַיְּמֵנִי Ps. 119. 28 'preserve me alive!' Piel of קוּם; וְחִיַּבְתֶּם Dan. 1. 10 'so ye should endanger,' Piel of the stem חוּב; הִצְטַיַּדְנוּ Josh. 9. 12 'we provided ourselves with food,' Hithpael denominative from צַיִד 'food,' from the stem צוּד 'to hunt,' we have instances of forms of stems with weak stem-consonants treated after the analogy of stems with strong consonants.

In a few cases we find, instead of the usual form of the construct infinitive from ל״ה stems (גְּלוֹת), a form which is based on the analogy of the same form from the strong stem קְטֹל; such forms are עֲשׂה 'to do,' רְאֹה 'to see,' קְנֹה 'to get,' שְׁתוֹ 'to drink.'

Such forms as שְׁוָרִים 'boves,' חֲוָחִים 'thickets,' חֲיָלִים 'forces,' תְּיָשִׁים 'bucks,' עֲיָרִים 'cities,' when compared with the more organic form of such stems as seen in שׁוֹטִים 'whips,' קוֹצִים 'thorns,' אֵילִים 'terebinth-trees,' show the influence of the analogy of the form דְּבָרִים.

In the different forms of the *verba mediae geminatae* (or ע״ע verbs) there are many forms which seem to point to an original bi-consonantal stem, e. g. סב, while others are formed as if there were three original firm and equally legitimate stem-consonants, סבב. The former are the more organic, more in accordance with Hebrew phonetic law; the latter are analogical.

Thus by the side of such forms as דַּק 'he has beaten small,' חַם 'he is warm,' and מַר 'it is bitter,' we have other forms with the second stem-consonant repeated. בָּזַז 'he has plundered,' חָמַם 'he is warm,' מָדַד 'he has measured,' סָבַב 'he has surrounded.'

After the same analogy we have substantives such as רְטֶט 'terror,' the plural עֲמָמִים 'nations'[1] by the side of the more organic form עַמִּים.

So also in the construct infinitive we have such forms as גְּזֹז 'to cut,' לִסְבֹב Numb. 21. 4 'to compass,' עֲזוֹז 'to make strong,' צְרוֹר 'to bind up,' מְסֹס Is. 10. 18 'to melt away,' שְׁדוֹד 'to spoil' Jer. 47. 4, שְׁלֹל 'to spoil,' by the side of the more organic forms סב, עוז, גז.

So also the imperfect יִדּוֹד (stem נדד) 'to flee from' and יְחֻנַּן from the stem חנן 'to be gracious,' by the side of the more organic יָחֹן.

[1] Cf. Nöldeke, Mand. Gramm. §132; Syr. Gramm. §§21D and 93.

In Hebrew all forms with the (so-called) *Dagesh forte implicitum*, especially in the Piel, Pual, and Hithpael of verbs whose second stem-consonant is a guttural, are analogical. The phonetic law is that the guttural cannot be doubled. Then the short vowel preceding the guttural must be lengthened because it stands in an open unaccented syllable. Cases where this is not done, e. g. בִּעֵר 'he has consumed,' נִאֵץ 'he has despised,' נִאֵר 'he has rejected' are based on the analogy of קִטֵּל.

The "virtual doubling" of the gutturals is a fiction of the grammarians.

CLASS I.

Division C.

Forms of the strong stem after the analogy of forms from weak stems.

One of the most remarkable cases where the form of the strong verb has been influenced by the weak verb in Hebrew is the long accented *î*-vowel in the final syllable of the Hiphil or causative. So Bickell, §47: "The remarkable transition of *i*, which has arisen from *a* to *î* in the *Hiphîl*, has perhaps originated according to an erroneous analogy from the conjugation of the verbs mediae *v.y.*, where this *î* is phonetically legitimate." Compare also Stade, Hebrew Grammar, §91. König's criticism (Lehrgebäude, §27. 4), that the basis is too narrow, and that it is too bold to explain a form of the regular verb by a single form of the irregular verb, is hardly borne out when we consider the prevalence and power of analogy. See Delbrück, Einleitung in das Sprachstudium, p. 108, where the case is cited that four Old Slavonic verbs, *jesmĭ, věmĭ, damĭ, jamĭ,* have effected that in New Slovenian and New Servian all the verbs of all classes of conjugation end in *m* in the first person singular number.

In some forms of the intensive from tri-consonantal stems, where it is formed by the repetition of the third stem-consonant, we may have the influence of the analogy of originally bi-consonantal stems where such forms are organic. Such are שַׁאֲנָנוּ Job 3. 18 'they are at ease,' אֻמְלְלוּ 'they languish.'

Under this head may be placed also those plural forms of modern Syriac in which the stem of the singular is enlarged by the repetition of the final stem-consonant (Nöld. Neus. Sprache, p. 143, §72). These are probably, as Nöldeke remarks, based on

such plural forms as *'amamîn*, Hebrew עֲמָמִים. The instances of this kind are given by Nöldeke loc. cit. Among them are מללא (*mîlâlê*) 'words,' ברכבא (*birkâkê*) 'knees,' טלפפא (*ṭilpâpê*) 'eyelashes.'

Under this head may also be placed those cases where a phonetic process, starting under certain fixed conditions, was afterwards applied to stems where these conditions did not exist. In such cases the strong or regular verb leaves its normal paradigm or type and follows the analogy, not exactly of a weak stem, but of a stem whose stem-consonants, although strong and firm, still have some peculiarity which causes a change in the inflection.

The Semitic verb forms its reflexive by a prefixed *it* or *ta*. In Ethiopic it is *ta*. In Hebrew the form of the reflexive prefix is הִת. In stems beginning with a sibilant the ת of this reflexive prefix is transposed so as to come after the sibilant instead of before it. Thus, from שָׁמַר 'to keep,' 'to watch,' the imperfect reflexive is יִשְׁתַּמֵּר 'he will observe (for himself).' This mode of forming the reflexive from stems beginning with a sibilant by means of an infixed instead of prefixed *t* is found in nearly all the Semitic languages. In Arabic and Assyrian, however, this mode of forming the reflexive by means of infixed *t* (*ta* or *tau*) is not confined to stems beginning with a sibilant, but the reflexive particle is universally infixed.[1] In this case the strong probability is that it was not so in the primitive form of the language, but that it started, as in Hebrew, with the stems beginning with a sibilant, and then the influence of these formations gradually spread until it included all stems.

Only two other explanations are possible; either the primitive Semitic form was indifferently prefixed or infixed *t*, or else it was universally infixed, and became prefixed in Hebrew, Aramaic, etc., except in the case of stems beginning with a sibilant. Praetorius, in his article "Äthiopische Grammatik und Etymologie," in the first number of the Beiträge zur Assyriologie, edited by Delitzsch and Haupt (p. 25 and note), says that it is not unlikely that the reflexive *t* was originally infixed in Ethiopic. The proof of this which he cites, however, in the case of *kadána* 'texit' seems very weak.

[1] In Assyrian the *t* is infixed not only in the reflexive derived from the *Qăl* (*iptálix*), but also in the reflexive derived from the intensive stem (*uptallix*). In the latter formation the *t* is prefixed in Arabic (V and VI), not infixed as in the eighth form.

Delitzsch, on the other hand (Assyrian Grammar, §83), remarks that the reflexive prefix was originally prefixed and not infixed, and that traces of this prefixing are still found in Assyrian. This, too, favors the position that the change from prefix to infix first took place in the case of stems beginning with a sibilant, to avoid cacophony, and was then, by the force of analogy, extended to all stems.

A similar case of the extension of a phonetic change beyond its organic limits by the process of analogy is found in Amharic, in the linguistic phenomenon known as 'palatalization'[1] (German, Mouillirung), in which the pronunciation of a consonant is affected by a certain liquid modification occasioned sometimes by a following *i*, *j*, or *ê*, and sometimes also taking place without the influence of these sounds. In the cases where the palatalization is occasioned by the sounds mentioned, certain modifications in vocalization are phonetically legitimate. In some cases, however, these changes in vocalization take place where they are not organic, but analogical. There is no *i*, *j*, or *ê*-sound to occasion them, yet the language acts as though there were, simply because the phenomenon of palatalization is usually accompanied by these sounds.

In the pronominal suffix of the 3d person plural, masculine or feminine, *ātjăw*, for instance, the liquid modification of the *t* is not occasioned by a following *i*, *j*, or *ê* sound. Yet the language acts as though there must be a latent *ê*-sound, and in some cases places it there; so in the form *bîlâtjêw* 'when he told them.'

So also it often happens that a stem which originally ended in *w* or *j* lost its final stem-consonant in the modern Amharic by a process of phonetic decay. The theme thus shortened is simply inflected as though it never had another stem-consonant, or else a trace of the vanished final *j* is left in the palatalization of the preceding stem-consonant. In some cases, however, where this palatalization has taken place without the influence of a final *j* the language proceeds on the presumption that there must have existed such a final stem-consonant. Thus the verb *mănătjă* never existed in the form *manataja*, yet it forms its imperfect, not *imantj*, as it should do, but *imanatj*, as though there were a final stem-consonant *j*. See this whole matter fully treated and illustrated in Praetorius, Amharische Sprache, p. 45, §23b, and pp. 237–240, §200.

[1] Cf. Beitr. z. Assyr. I 257, n. 9.

CLASS II.

Analogical formations involving changes and confusion in vocalization.

In Semitic we distinguish in the nominal formations between substantives of *internal formation* (Stade: Nomina innerer Bildung; Barth: Schlichte Nomina) and substantives of external formation (N. äusserer Bildung). Substantives of external formation are formed either by *prefixes* or by *suffixes*.

Substantives formed directly from the stem without consonantal additions are divided into different classes according to differences in their vocalization.

According to Barth, Nominalbildung, these different nominal formations in Semitic exhibit many instances of the analogical influence of one form or class of forms upon another in the matter of vocalization.

The following is a brief and summary statement of the fundamental positions of his book:

The nominal formations of Semitic are formed either from the perfect or from the imperfect verb-stems.

There are three classes of perfect verb-stems, distinguished by three characteristic vowels, *ă*, *ĭ*, *ŭ*. Forms with *a* are transitive. Forms with *i* and *u* are intransitive. Each of these classes of perfect-stems gives rise to a corresponding class of nominal formations likewise distinguished by the three characteristic vowels, *a* for the transitive, and *i* and *u* for the intransitive.

There are also three classes of imperfect stems, distinguished likewise by the three characteristic vowels *u* and *i* for the transitive, *a* for the intransitive. Each of these three classes, again, gives rise to a corresponding class of nominal formations.

In many of these nominal formations we observe that the characteristic vowel of the class to which it belongs has been correctly maintained. These call for no further attention. In other cases, however, we find that a change has taken place. That is to say, the verbal stem, either perfect or imperfect, as it now exists, has a different vowel from that of the corresponding nominal formation. In cases such as these there are two possible explanations. Either, in the original form of the language the verbal stem existed in two forms with two different characteristic vowels, one of which subsequently ceased to be used, surviving, however, in the corresponding nominal formation; or else the anomalous characteristic vowel of nominal formation is the result of analogy.

I have noted the following cases as cited by Barth:

§ 17β. Intransitive nominal forms of the form *qŭtŭll*, legitimate when formed from *u*-perfects, but sometimes also found derived from *i*-perfect stems. Thus *'umudd* (perf. *i*) 'full of youthful strength.'

Sometimes intransitive adjectives of this form are formed from transitive stems. Thus *ṣumull* 'hard, firm,' *kubunn* 'avaricious.'

P. 36, §24. Intransitive nominal forms of the form *qŭtl* derived from *i*-perfects.

In Arabic:

zuhd from *zahida* 'to be white, glossy.'

ḫusr 'loss' from *ḫasira* 'to lose.'

'ujb from *'ajiba* 'to be astonished.'

ruhb from *rahiba* 'to fear.'

ruḡb 'avidity, voracity' from *raḡiba* 'to wish, desire.'

In Hebrew:

אֹמֶן 'faithfulness,' from אָמַן (?) 'to be faithful.'

חֹסֶר 'want' from חָסֵר 'to want.'

In Syriac:

רֻגְזָא 'anger' from רְגִז 'to be angry.'

עֻשְׁנָא from עֲשֵׁן 'to be strong, heavy.'

שֻׁמְנָא from שְׁמֵן.

גֻחְכָא 'laughter' from גְּחֵך 'to laugh.'

שֻׁלְמָא from שְׁלֵם 'to be whole.'

רֻחְקָא 'length' from רְחֵיק.

Barth, p. 43, §28c. Instances of the form *qătîl* intransitive from *u*-perfect stems.

sarî' 'rapid' from *saru'a* 'to hasten.'

jalîd 'hard' from *jaluda* 'to be hard, firm.'

karîm 'noble' from *karuma*.

kabîr 'old' from *kabura*.

kabira, fut. *a*, 'to be advanced in age,' is, however, also given in the dictionaries.

kaṯîr 'many' from *kaṯura*.

'aẓîm 'great, large, immense, huge' from *'aẓuma*.

In the Targums:

נגיב 'dry,' שדיך 'quiet,' דמיך 'sleeping,' חשיך 'dark,' from stems having *u* in the perfect.

The same phenomenon is observed in nominal derivatives from imperfect stems (see page 96, §64d, e). Thus the Hebrew infinitive קְטֹל is formed not only from *u*-imperfect stems, where it is

organic, but also from intransitive verbs with *a*-imperfect, e. g. יָשֵׁן 'to sleep,' אָהֵב 'to love,' חָדַל 'to cease,' שָׂנֵא 'to hate,' יָרֵא 'to fear.' These are clearly the result of analogy. In other cases, however, we must consider the possibility that in a previous period of the language the two forms with two different characteristic vowels existed side by side, the one having survived in the present form of the verb-stem, the other in the corresponding nominal formation.

Thus in Hebrew imperfect *ă* is the regular imperfect of stems having a guttural as second or third stem-consonant, while the corresponding nominal forms often point to an original *u* or *i* form. Such are פֶּגַע 'to strike,' זַעַף 'to be angry,' שָׁלַח 'to send.' So also transitive *qitl* forms in Arabic from verbs *mediae gutturalis* which now have only imperfect *a, fi'l* 'act,' *siḥn* 'charm,' *riḥle* 'passage, journey.' Here it is more probable that the uniform *a*-imperfects are themselves the result of a later modification under the influence of analogy.

So also in the case of transitive nominal forms of the form *qătīl* or *qĭtīl* derived from the imperfect stems.

The imperfect *i* itself has been mostly crowded out by the prevailing analogy of the *u*-imperfects, while the original vowel has often been preserved in the corresponding nominal formation, especially the infinitive. (See Barth in ZDMG 43, 177–91.)

The following instances are given. Infinitives with suffixes: מִכְרָם (מָכַר 'to sell'), נָפְלָם, שִׁבְרִי.

Infinitives without suffixes: לַעְשֵׂר Deut. 26. 12 'to tithe'; also the noun מַעֲשֵׂר 'tenth'; לעזיר 'to help' 2 Sam. 18. 3 (Kĕthîbh), לַחֲלֹק 'to receive a portion.'

Sometimes even when the *i*-imperfect was preserved, and not crowded out by the prevailing analogy of the *u*-imperfect, its nature was misunderstood and this misunderstanding led to further analogical formations.

In many cases the language mistakenly assumed them to be Hiphil-imperfects, with which they completely coincided in form, and then by analogy produced other Hiphil forms to correspond with them.

So especially in the case of stems ע"י.

From יָרִיב, יָבִין, יָשִׂים, etc., were formed the Hiphil-forms הֵבִין, הֵזִיד, מֵצִיץ, מְרִיבָיו, מֵשִׂים, etc.

The same thing took place in case of the other stems. According to Barth (op. cit. p. 119, §78a): Whenever a transi-

tive form *qitl* of any stem points to an original *i*-imperfect, and when this stem occurs in some languages in the Qal-form, but in others only in the Hiphil, the presumption is that this Hiphil is of secondary formation, based on a misconception of the original *i*-imperfect. Thus the common Semitic form זֵכֶר, Arabic *ḏikr*, Ass. *zikru* points to an original *i*-imperfect stem *jazkir*; compare Aramaic נִדְכַּר with *ă* on account of ר.

As, however, this *i*-imperfect has disappeared from the *Qal* in Hebrew, it is probable that it was retained as a Hiphil, and then the other Hiphil forms were formed as a later analogical development.

Arab. *ḥaḍana* 'to take in the arms' has at present only the *u*-imperfect. From this we have Hebrew חֹצֶן 'arm, bosom,' and Arab. *ḥuḍne* 'embrace.' But the Hebrew חִצְנוֹ and Arab. *ḥiḍn* point to an original *i*-imperfect.

From הֵפֶךְ 'reverse, contrary,' and הֲפֵכָה 'overthrow,' we infer the former existence of a form יַהְפֵּךְ as *Qal*-imperfect. This is not found now in north-Semitic. But Syriac has *Aphēl* in the same sense as Hebrew and Syriac *Qal*. Compare also Hebrew הָהְפַּךְ Job 30. 15, which presupposes the *Hiphil*. In the same manner the noun *siqi̯* (watering) and the imperfect *i̯asqi* explain the formation of the later *Hiphil*, הִשְׁקָה and Aram. אַשְׁקִי, resulting in crowding out the *Qal* which must have existed at a former period; cf. שֹׁקֶת, Syriac שָׁקִיתָא etc.

So also the Hebrew נָסִיךְ 'libation,' form *qatîl*, Deut. 32. 28, points to an original *i*-imperfect. Hence אַסִּיךְ Ps. 16. 4, וַיַּסֵּךְ Gen. 35. 14 are regarded by Barth as originally *i*-imperfects *Qal*. Being erroneously regarded as Hiphil-imperfects they furnished the basis for further analogical Hiphil-formations. Another case is וַיַּקְהֵל. Being regarded as a Hiphil-imperfect it furnished the basis for further analogical Hiphil-formations, but מַקְהֵלִים, קְהִלָּה, and מַקְהֵלוֹת point to an original *i*-imperfect of the *Qal*.

P. 116, §77a, 3. In Arabic the transitive form *qitle* is formed organically from *i*-imperfect verb-stems to express the mode or manner of the action expressed by the verb. After this meaning had become established for this form it was extended by the force of analogy to verbs of every class.

P. 126, §82. Transitive nominal formations *qŭtûl*, *qătûl* formed from the imperfect.

Where such formations exist from stems which at present do not have *u* as the characteristic vowel of the imperfect we must

again, as elsewhere, distinguish two cases; either at an earlier period the *u*-imperfect existed side by side with an *i*- or *a*-imperfect, and was gradually displaced, or else the *u*-nominal formations are the result of analogy. Instances of the former case are seen where the Arabic has only *i*-imperfect while Hebrew and Syriac have *u*-imperfect; so Arabic *hulûk*; יְהַלֵּךְ and *ğufûr*. But many such cases are probably the effect of analogy.

The following are instances of infinitives of this class where there existed no corresponding *u*-imperfect:

u̯uṯûb from *u̯aṯaba* 'to leap.'
u̯urûd from *u̯arada* 'to arrive.'
u̯ujûd from *u̯ajada* 'to find.'
u̯ujûb from *u̯ajaba* 'to be necessary.'
u̯u'ûl from *u̯a'ala* 'to seek refuge in.'
uujûz from *u̯ajaza* 'to be brief.'

P. 135, §85d. The infinitive *qatîl* is used to form collectives. Organically it belongs, of course, to *i*-imperfects, but it is often found where there is no corresponding *i*-imperfect, especially to denote collectives of the names of animals. So *kalîb* 'dogs,' *ḑa'în* 'sheep,' *ma'îz* 'goats,' *naqîd* 'cattle.'

e. In Ethiopic the infinitive *qătîl* has become the regular verbal infinitive for every class of verbs, and as such is formed from all the different conjugations. This analogical extension of the infinitive form *qătîl* has completely crowded out the old parallel form *qătîl*.

f. So also in later Hebrew (Mishna) the feminine קטילה, used to denote abstract notions is formed without regard to the character of the stem. The instances given are, נפילה, פריקה, חסימה, יציאה, אמירה, שביתה, הליכה, ביאה.

P. 144, §92. Transitive *qat'lat*. In the case of the words נְקֵבָה and טְרֵפָה we are unable to determine whether we have the evidence of a former *i*-imperfect of these stems, or analogical formations induced by the signification of the same form from other stems.

P. 174, §122c. Speaking of the active participial form *qătûl* (or *qâtûl*) he says that a genetical connection with the infinitive *qŭtûl* is beyond question, and both go back in their origin to the *u*-imperfect. But just as it was shown (in paragraph 82 B of this same work) that the infinitive *qŭtûl* was often formed analogically when there appears no *u*-imperfect, so also the participial form *qătûl* is used to form an active participle from a number of stems which show only the *i*-imperfect; so *ḑarûb* (by the side of *ḑarîb*)

'striking,' ***hatûf*** 'buzzing, sounding, clanging,' ***ġašûm*** 'violent' (but ***ġašama*** is given with *u*-imperfect), ***kasûb*** 'gaining, acquiring.'

P. 175, §122a, note 1. Instances of active participles of the form *qătûl* formed from stems having *i*-perfects, through the influence of analogy.

In Arabic: *ḍaḥûk* 'laughing,' *'amûl* 'doing,' *i̯a'ûs* 'despairing.'

In Hebrew: שְׂנֻאֵי נפשׁ 2 Sam. 5. 8 and אֲהוּבַת רֵעַ Hosea 3. 1, are cited as instances of this form.

From the Mishna, העסוקין 'busying themselves,' Para 4. 4, זית הנטופה 'dripping olive,' Pēā 7. 1 הוי שקוד 'be watchful,' Ab. 2. 14 שרוי 'dwelling,' etc.

P. 178, §123a. The form *qătûl* as passive participle is formed in Hebrew from all stems indiscriminately.

P. 186, §126a. The participial form *qătîl* organically connected with *i*-imperfects is formed in Arabic from verbal stems of every kind.

d. In Aramaic this form has become the regular passive participle, and as such is formed from every transitive verb.

P. 201, §136b. Participle *qâtîl.* This form arises from the transitive *i*-imperfect. The form from the *i*-imperfect, rather than that formed from the *u*-imperfect, became the prevailing one through the influence of the forms of the participle in the derived conjugations, which show an *i*-vowel after the second stem-consonant.

The only difference between the participle of the Qal and that of the derived conjugations lies in the fact that the latter prefix an *m*, while the former, not taking the prefix, lengthen the vowel of the first syllable.

After this form was established as the participle of the transitive *i*-imperfect, it was extended to all transitive imperfect stems, and also to those stems which are intransitive in structure but transitive in meaning. In a few cases it is extended to verb-stems intransitive in meaning.

Arabic, ***âmin*** 'sure,' ***sâlim*** 'safe,' ***bâ'id*** 'far.'

Eth. ***râtĕ'*** 'true.'

Aram. דָּחֵל 'fearing,' חָדֵא 'rejoicing.'

Heb. זוֹלֵלָה 'base, abject.'

I have stated these principles and given these illustrations just as they are given by Barth. I must say, however, that to my mind his whole position and the value of all his discussions are

extremely doubtful. For, first, as he himself admits in many places, we do not know how far these forms, which apparently show a different vowel from that of the form from which he derives them under the influence of analogy, may go back to other forms which no longer exist, but which, when existing, had the same vowel as the nominal formation derived from them.

The whole of §100, for instance, on the imperfect infinitives of the derived conjugation is made extremely uncertain by the admission which he rightly makes, that formerly these imperfects may have shown an *u* as well as an *i*-vowel. This but shows how uncertain the whole matter is, far too uncertain, in fact, to form the basis of scientific investigations and conclusions.

But again, I do not see that he establishes with any degree of certainty the fundamental position of his whole book, viz. that all the nominal formations must be referred either to the perfect or imperfect verb-stems, whose characteristic vowel will normally be the characteristic vowel of the corresponding nominal formation, and that all deviations therefrom are the result of analogy. Why should all nominal formations necessarily come through the channels of the perfect and imperfect verb-stems? Why can they not be referred directly to the simple ground-stem, without the intervention of the perfect or imperfect verb-stems? These are questions not satisfactorily answered by Barth, while they are suggested by the many deviations from the principle which he seeks to establish.

PART III.

Besides such analogical formations as have just been presented and discussed, there are also many such formations in the inflection of the substantives. In the various processes of inflection, such as the formation of the construct, emphatic, plural, and in the addition of pronominal suffixes, each class is governed by its own peculiar laws. In a great many cases the law of the group maintains itself and no confusion occurs. But from the nature of the case, considering the subtle nature of these formations and distinctions, we might expect occasional confusion and transitions from one class or type to another, in other words, metaplasms and analogical formations. And such, on examination, we find to be the case. Thus, according to Stade (§191), in Hebrew the nominal forms *qaṭl, qiṭl, quṭl* form their plurals after the analogy of the forms *qaṭal, qiṭal, quṭal.*[1]

On these plural formations last mentioned, however, we have an interesting dissertation by Mr. W. H. Salter Brooks, " Vestiges of the Broken Plural in Hebrew " (Dublin, 1883). The object of this paper is to show that the stems *qaṭl, qiṭl, quṭl* formed their plurals originally without any plural termination whatever, but simply by internal vowel changes, thus: *qaṭal,* which became *qaṭâl, qiṭal* or *qiṭâl, quṭal* or *quṭâl,* exactly like the corresponding Arabic internal or broken plurals. According to this view, then, the plural of these words is sufficiently indicated by these internal vowel changes. But subsequently, owing to the tendency to vowel corruption and obscuration, these distinctions were not sharp enough and clear enough to distinguish between the singular and plural. Thus at first the Hebrew would have presented the scheme:

s. *baʿl.* pl. *baʿal* 'lord.'
s. *rumḥ.* pl. *rumaḥ* 'spear.'

But owing to the presence of the guttural consonant, the singulars were bound to become *baʿal, rumaḥ,* and actually did so, that is, become identical with the plurals. Hence, in such cases, the

[1] Cf. Haupt, Beiträge zur assyr. Lautlehre (Göttingen, 1883), p. 89, n. 3; Praetorius in Beiträge zur Assyriologie, Vol. I (Leipzig, 1890), pp. 374–7.

addition of the external sign of the plural was necessary in order to distinguish the singular from the plural. But after it was added to such forms, the language lost sight of the distinction between singular and plural sufficiently maintained by vowel changes, and gave to the external or sound plural formation universal extension.

The application of the external plural sign in these cases, therefore, is not to be regarded as organic, but as the result of analogy. On this view of the matter we have here an instance of analogical formations Class III, D, the addition of formative elements where they do not belong.

In Aramaic and Syriac substantives of the type *qaṭl* sometimes form their absolute and construct state after the analogy of the type *qaṭil*. The organic form reappears in the emphatic state. (See Haupt in Hebraica, Vol. I, p. 228, note 1.)[1]

Thus in Syriac we have the regular normal forms in

תְּרַע (for *tărá'*) תַּרְעָא 'door.'

פְּגַר (for *păgăr*) פַּגְרָא 'corpse.'

But נְפֵשׁ 'soul' stands for *napiš* (form *qăṭil*). The emphatic נַפְשָׁא is syncopated from *nápišâ*.

So also כְּתַף, כַּתְפָּא 'shoulder,' and מְלֶךְ ... 'king,' etc.

On the other hand, the ground-form of בְּעֵל 'lord,' is *ba'l* (type *qaṭl*), construct *ba'al*, and from this we ought to have, by the laws of Syriac phonology, the form בְּעַל, and the *i*-vowel of the second syllable is due to the analogy of forms like נַפְשָׁא, נְפֵשׁ, in other words, a metaplasm from the type *qaṭl* to the type *qaṭil*.

So also כְּרֵס, כַּרְסָא 'stomach,' צְלֵם, צַלְמָא 'image,' טְעֵם, טַעְמָא 'reason,' etc.

Again, all vowel changes in the stems of words are governed by regular phonetic laws. (See, e. g. the laws of Hebrew vowel changes in Stade, §73 fg.). But in individual cases analogy often plays an important part. In such cases an individual is transferred from one group to another, or a phonetic process is taken out of its legitimate sphere and applied to cases where it is not legitimate.

An example is given in Stade, §78b.

A long *â*-vowel of primitive Semitic generally appears in Hebrew as *ô* (Stade, §77a). But an original *u*-vowel may also appear in Hebrew as *ô*. This *ô*-vowel, therefore, in Hebrew may

[1] Cf. Lagarde, Bildung der Nomina, pp. 73 and 74, also Beitr. z. Assyriologie, I 325 and 375.

represent either an original *â* or an original *u*-vowel. In cases where it represents an original *u*-vowel it is quite correctly shortened to *ŏ* when it stands in a closed syllable. But in cases where it represents an original *â* such a shortening is manifestly out of place, and is produced only by the force of the analogy of other forms where this change is phonetically legitimate.

Instances are שְׁלָשְׁתָּם from שָׁלֹשׁ 'three,' נְחָשְׁתִּי from נְחֹשֶׁת 'copper,' טְהָר־ from טֹהַר 'purity.'

Shortening of such vowels to *ŭ* is likewise analogical, as in נְחֻשְׁתַּיִם, חַרְטֻמִּים 'scribes' from חַרְטֹם.

The shortening of the *â*-vowel in the word לָשׁוֹן 'tongue,' construct לְשׁוֹן, is also analogical, the stem of לָשׁוֹן being לוּשׁ. (See Haupt in Hebraica, Vol. I, p. 178, note 4; also Beiträge zur Assyriologie, I 165, 166 and 324.)

In the Hophal from stems ע״ו such as יוּטַל from the stem טול 'to be long,' הוּקַם from the stem קום 'to stand,' the short *ă*-vowel of the final syllable is not organic, but due to the analogy of the strong verb. Compare also הוּמְתוּ 'they were killed,' stem מות, and הוּבָאוּ 'they were brought in,' stem בוא.

Again, in the vowel changes which a word undergoes in receiving pronominal suffixes we find cases of the influence of analogy.

Take, for example, the substantive of the form *qaṭal* (which in Hebrew appears as דָּבָר, קָטָל) with pronominal suffixes.

The following is the law of vowel change as stated by Bickell (p. 77, §105):

"The vowels before the suffixes are changed entirely according to universal vocal laws. The pretonic syllable should be heightened. The syllables at a greater distance from the tone should be volatilized, and open syllables which stand before a half-vowel should retain their short vowel. *Only the suffix* ka *forms an exception to the latter rule*, before which *ă* is heightened in the antepenult."

Thus from דָּבָר (type *qăṭăl*) 'word,' we have דְּבָרִי 'my word,' דְּבָרוֹ 'his word,' דִּבְרְכֶם 'your word,' but דְּבָרְךָ 'thy word.'

This heightening of the vowel *ă* before the suffix ךָ as compared with the short vowel before כֶם is due to the analogy of the contiguous forms דְּבָרוֹ, דְּבָרְךָ, דְּבָרִי.

The distinction between ךָ as *light suffix* and כֶם, כֶן as *grave suffixes* is a mere fiction of the grammarians.

For instances of the influence of analogy in the affixing of pronominal suffixes in Syriac see Nöldeke, Syriac Grammar, §145 E.

Another case of unwarranted application of phonetic processes under the influence of analogy is given by Stade, §355b.

The organic form of substantives derived from ל״ה stems with the suffix of the 2d pers. masc. is seen in מוֹרֶיךָ 'thy teacher' (stem ירה), מַחֲנֶיךָ 'thy army' (stem חנה), מִקְנֶיךָ 'thy flock' (stem קנה), עֹשֶׂיךָ 'thy maker' (stem עשה).

In other cases an analogical shortening has taken place, based on the analogy of דְּבָרֶךָ *in Pause* and out of Pause דְּבָרְךָ. So we have in Pause שָׂדֶךָ 'thy field,' but out of Pause שָׂדְךָ. So also מַטְּךָ 'thy rod' (stem נטה) מִקְנְךָ, נָוְךָ 'thy dwelling' (st. נוה) מַפְרְךָ. Gen. 48. 4 Hiph. Prtcpl. stem פרה, מְצַוְּךָ. Piel Prtcpl. stem צוה 'to command.'

So also in the forms of the verb with suffixes we find instances of the influence of analogy in the confusion of vocalization.

When the suffix of the 2d person sing. *ka* is affixed to a verbal form ending in a consonant it ought to be hard.

So quite organically in אֶתְּקֶנְךָּ Jer. 22. 24 'I will pluck thee' (stem נתק).

But when this same suffix is attached to the 3d person, fem. sing. perfect (which never had a final vowel) it is spirated after the analogy of the same suffix attached to the masculine, where the spiration is organic because this form ended originally in a vowel. In other words, *qătălăt-kă* was understood as standing for *qătă-lătă-kă*, because *qătăl-kă* stood for original *qătălă-kă.*

On the other hand, forms with hard ך have influenced analogically forms which should have been spirated.

So בֵּרֲכֶךָּ Deut. 24. 13 'he has blessed thee.'

Of a similar nature is the application of the pausal form of the suffix with a hard ך to substantives.

So דַּיֶּךָּ Prov. 25. 16 'thy sufficiency.'

מְיַסְּרֶךָּ Deut. 8. 5 Piel Prt. 'thy instructor.'

עֹנֶךָּ, מְצַוֶּךָּ (stem ענה) 'thy answerer.'

צַדְּקֶךָּ 'to justify thee' Job 33. 32 (Piel Inf.).

לְקַלְלֶךָּ Deut. 23. 5 Piel Inf. 'to curse thee.'

Examples of forms with spirated ך where it ought to have been hard:

אֲכָלָתְךְ 'she consumed thee.'

יְלָדַתְךְ 'she bore thee.'

חִבְּלָתְךְ Cant. 8. 5 'she brought thee forth.'

A similar case is pointed out by Bickell, §113. The imperative had no final vowel even in primitive Semitic. קְטֹל=*qṭul*=*quṭul.*

"But," says Bickell, "the Hebrew forms with suffixes presuppose a final $i=u$, as in the future." In other words, the form of the imperative with suffixes is based on the analogy of the imperfect with suffixes.

Examples are:

עָבְדֵהוּ 'serve him.'

תְּנֵהוּ 'give him,' stem נתן.

שָׂאֵהוּ 'bear him,' stem נשא.

דְּעֵהוּ 'know him,' stem ידע.

פְּרָעֵהוּ 'let him go.'

אַמְּצֵהוּ 'strengthen him.'

חַזְּקֵהוּ 'strengthen him.'

On the other hand, in Aramaic the organic form appears without any vowel, thus הַעֵלְנִי Dan. 2. 24 'bring me in,' stem עלל, *aphel;* cf. Nöldeke in ZDMG 38, 408.

In his Vergleichende Studien III (ZDMG 43, 181) Barth has given us a treatise on analogical changes observed in the vocalization of the imperative and imperfect of some verbs.

The following is a brief summary of his view:

The imperative is formed from the imperfect. Corresponding to the three classes of imperfects, therefore, distinguished by the three characteristic vowels *u*, *a*, and *i*, there must have been three imperatives, *u*, *a*, and *i*. The *u*-imperative becomes קְטֹל; the *a*-imperative is seen in אֱהַב; the *i*-imperative is seen in שֵׁב. תֵּן and רֵד.

All the forms of the 2d pers. fem. sing. which have the characteristic *i*-vowel point to an original *i*-imperfect. In the imperfect the vowel has been mostly changed to *u* through the influence of other *u*-imperfects. In the imperative, on the other hand, it has been maintained. This explains the forms אִמְרִי 'speak,' מִכְרִי 'sell,' עִבְרִי 'pass,' חִגְרִי 'gird,' שִׁפְכִי 'pour,' אִסְפִי 'collect,' חֶשְׂפִּי 'uncover.'

The *i*-vowel in these imperative forms, therefore, is an indication of the original *i*-vowel in the corresponding imperfect forms, just as forms like מָלְכִי 'rule,' עָלְזִי 'exult,' point to an original *u*-vowel.

So also in the 2 pers. masc. sing. נִצְּרֶהָ Prov. 4. 13 'preserve her,' and in the forms with ־ָה, such as נִצְרָה 'preserve,' מִכְרָה 'sell,' עֶרְכָה 'arrange,' אָסְפָה 'collect,' we see an original *i*-vowel.

Not so, however, in the 2 pers. masc. pl. Here nearly all the forms which originally had the characteristic vowel *u* now have the vowel *i*. The change has been made under the influence of the analogy of those forms where the *i*-vowel is original.

Only three cases remain in which the original *ŭ*-vowel has been preserved, viz.

חָרְבוּ from חָרֵב 'to be laid waste.'

מָשְׁכוּ from מָשַׁךְ 'to draw.'

שָׁדְדוּ from שָׁדַד 'to oppress, destroy.'

For instances of forms of the Assyrian verb where the force of analogy has resulted in changes in vocalization, see Haupt, "Der Keilinschriftliche Sintfluthbericht," in KAT.[2] 68, note 2.[1] By the side of the older organic forms of the present, such as *ibâluṭ* 'he lives,' *išâgum* 'he cries,' *izânun* 'it rains,' we have later analogical formations, such as *izanan*, *išakan* 'he places,' where the vowel of the last syllable has been influenced by the vowel of the preceding syllable. Delitzsch, however (Assyrian Grammar, §90a, note, also §94, and §115), maintains the contrary view, that *izanan* is the organic and *izanun* is the analogical.[2]

Finally, on comparing the vocalization of the Hebrew intensive perfect and imperfect with the corresponding forms in Arabic, it seems probable that the Hebrew vocalization has been changed under the influence of analogy.

In Arabic *qattala, yuqattilu* is probably nearer the original in form, and more organic, while in Hebrew קִטֵּל the vowel of the second syllable has been influenced by יְקַטֵּל, the imperfect. Compare Barth, "Nominalbildung," p. xxii fg., also p. 70.

On this point Dr. Martin Schultze (Zur Formenlehre des semitischen Verbums, Wien, 1886, p. 48, §49), remarks that the derived stems are undoubtedly younger than the simple stem or Qal. It is to be assumed that they first formed the younger tense (the so-called imperfect), whose vocalization is the same in all the different dialects. But at a subsequent time, when the need was felt to form the afformative tense (or perfect), the tribes had separated. The older northern Semites retained, without reflection, the vowel of the future; the younger Arabs, however, chose, more consistently, the vowel of the Qal-Praeterite.

Class III.

Analogical formations with reference to the formative elements of words.

[1] Cf. Beiträge zur Assyriologie, Vol. I, p. 124.

[2] Cf. Barth in ZA II 377; Zimmern, ZA V 10.

Division A.

Mistaking a servile or formative element for part of the stem.

An interesting case of this kind is described by Stade, Hebrew Grammar, §400-2. It is in the formation of the 3d person feminine singular perfect of the ל״ה verbs. The ground-form was *qăṭăĭăt* (compare Arabic *radiịat*). This could become either *qâṭât* or *qâṭâjâ*. The former has been preserved in עָשָׂת Lev. 25. 21, stem עָשָׂה 'to make.'

הָיָת 2 Kings 9. 37 *Kethib*, stem הָיָה 'to be,' and with suffix עֲשָׂתְנִי.

The latter is preserved in חָסָיָה Ps. 57. 2 '(my soul) has fled (for refuge).'

But the form *qâṭât* was generally regarded as a regular perfect tri-consonantal stem ; the *servile* ת was erroneously regarded as a stem-consonant. Then, taking the forms *qâṭᵉlâ* and the pause-form *qâṭâlâ* as models, the feminine ending *â* was appended, giving the form *qâṭâtâ*. This form has been retained in the pause, הָיָתָה, עָשָׂתָה, etc. From this, after the analogy of *qâṭᵉlâ*, we have the usual form הָיְתָה.

Another case of this kind is seen in the treatment of the Niphal of the ע״ע-stems. The ground-form is *năḳăṭṭ*. The organic form is seen in נָחַר, stem חרר 'to be dry.'

נָסַב, stem סבב, 'to turn.'

נָקַל, stem קלל, 'to be light.'

But in other cases it is written as though it were the *Qāl* of a verb פ״ן, the נ preformative being erroneously regarded as a stem-consonant.

So in the pointing נָמֵס, נָקֵל, נָסֵב, stem מסס, 'to melt.'

נָרֹץ Eccl. 12. 6, stem רצץ, 'to break.'

Then, as from כָּבֵד we have in the feminine כָּבְדָה, so we have the feminines נָבְקָה, stem בקק, 'to empty.'

נָסַבָּה and the plural נָזֹלּוּ, stem זלל, 'to shake.'

Sometimes a ת, which really is the sign of the feminine, is treated as if it were a stem-consonant.

The examples of this class of analogical formations found in Syriac are given by Nöldeke, Syriac Grammar, §78 and 80.

The same thing has taken place in Ethiopic. See Dillman's Grammar, §133, and §137, 5b.

For the Assyrian examples of this class see Haupt, SFGM 73;[1] also Delitzsch, Assyrian Grammar, §69.

[1] Cf., however, Haupt, Beiträge zur Assyriologie, Vol. I, p. 16.

muttâti, pl. of *muttu*.
lêtât, pl. of *lêtu* 'night' (st. לאה).
isitâte, pl. of *isîtu* 'pillar.'[1]

On the Hebrew קְשָׁתוֹת, דְּלָתוֹת, etc., consult Am. Journ. Phil. XII 37; also Barth, in ZDMG 41, 605–607, and Nominalbildung, p. 4b.

In Syriac the formations -וָתָא, -וָת, -וָן from nouns in -וּתָא, are organic only in derivatives from stems ל״ו, so דְּמוּתָא, pl. דְּמְוָתָא 'image.'

In forms like מַלְכְוָתָא, מַלְכוּ 'kingdom,' the ending וּת, which is merely a formative, is treated after the analogy of those words where it forms part of the stem.

It might be expected that languages, starting out, as do the ancient Semitic, with a sharp distinction between stem-consonant and servile or formative element, would in the course of time and a development extending over more than a thousand years, lose the sharpness of this distinction and incorporate elements which originally were formative as part of the stem. This expectation is borne out in the study of the Amharic, the Mandean, and the modern Syriac.

See Dr. Martin Schultze, "Zur Formenlehre des semitischen Verbs," p. 43, §45.

Thus in Praetorius, "Amharische Sprache," pp. 130–140, under the title "*Wurzelerweiterung*," we have a study of those stems of the Amharic language which have been extended beyond the original three stem-consonants, mainly by incorporating and reckoning as part of the stem those consonants which originally were formative.

In many cases, however, as is pointed out by Praetorius, the incorporation of the formative element is preceded by the loss of one or more of the original stem-consonants, so that the formative element is taken as a compensation for this loss, and the appearance of having three stem-consonants is restored.

The other methods of extending the original stem, viz. by doubling the original bi-consonantal stem, and by other additions, or by a repetition of one of the original stem-consonants of the tri-consonantal stem, do not, of course, come up for consideration in this paper. We are concerned only with those cases mentioned by Praetorius as constituting the third method of extending the stem, namely, by incorporating a nominal, pronominal or

[1] Cf. Lotz, Tiglathpileser, pp. 110, 56 and 155, 27.

verbal formative element, or even a preposition, as part of the stem. I add a list of the cases mentioned by Praetorius, referring to his work, however, for their fuller discussion.

The causative prefix *a* is treated as a stem-consonant in the stems *amara* as if it were a simple stem *primae gutturalis*; but in reality it has arisen from *'amāra*, the causative of a stem *med. gutt.*

So also *'adága* 'to grow.'

'asaláma 'to be a Mohammedan.'

A more doubtful case is *'arása* 'to moisten.'

The causative prefix *sa* or its modification *ša* is treated as a stem consonant in the following words:

sanakala 'to give offence, to be a stumbling-block' (*Anstoss erregen*).

shanagala 'to deceive.'

shamagala 'to become old.'

shanakara 'to leak.'

ṣhamaṭaṭa 'to despise, scorn' (perhaps).

shamana 'to weave.'

shaqaba 'to ascend.'

This seems to have been developed from *'ashāqaba* 'to lift up,' a second causative from *aqaba*.

So in the "Quinqueliterum" *shakarakara* 'to rise,' and *ṣabaraqa* 'to shine, sparkle.'

The following stems have been formed by raising the *t* of the reflexive prefix *ta* to the dignity of a stem-consonant:

tañā 'to sleep,' from *tanahaya* 'to rest oneself, to recover.'

tanafasa 'to breathe, to take breath.'

tanakuala 'to be deceitful.'

tālala 'to be deceived.'

talālafa 'to cross.'

tawāba 'to be beautiful.'

tarasa forms the new double reflexive *tantarasa* 'to support one's head by anything.'

tanabaya 'to prophesy.'

Perhaps also *tākata* 'to be slow, lazy.'

Sometimes the reflexive *t* has been weakened to *d*, and is then treated as a stem-consonant.

So in *dāsasa*, 'to feel of.'

Perhaps also *daraqa* 'to be dry' belongs here, and *danaquara* 'to be deaf, senseless.'

danagara 'to dissuade.'

Here also Praetorius mentions the Ethiopic *danagaḍa* 'to frighten,' and *danagala.*

Nominal formative elements are likewise incorporated as part of the stem; so *m* in the words *môshara* 'to be a bridegroom,' from Ethiopic *moshar* 'a saw.'

mashaga 'to barricade oneself.'

marakuaza 'to support.'

masaqala 'to hang.'

manazara 'to commit adultery.'

manatsha 'to spring forth.'

managaga 'to hold,' or 'to open another's mouth.'

mâkuata 'to vow.'

mâraka 'to take captive' (also in Ethiopic).

mâṣana 'to recommend' (also in Ethiopic).

So the prefix *'a* of internal plural formations is reckoned as part of the stem in *'amalaka* 'to adore God.' *'asamâ* 'to practise witchcraft,' formed from the plural *'asmât* 'witchcraft' with the loss of the *t.*

So also the nominal suffix *t* in the words *gazata* 'to excommunicate,' from the Ethiopic stem *wagaza.*

So perhaps from a noun with the suffix *ūt* or *ōt* we have *ṭanâwata* 'to offer opposition, to withstand.'

galamôta 'to play the whore,' from *gâlamôt* 'whore.'

So the consonant *n* of the abstract ending *ân* in *shalatana* 'to rule.'

m and *t* are treated as stem-consonants in *malakata* 'to denote,' from *lak'a.*

môgata 'to dispute,' from *wag'a* 'to push, to strike.'

mâlada 'to get up early.'

So the consonant *m* of the adjective ending *âm* is reckoned as part of the stem in such words as *quaraṭama* 'to have the rheumatism' and *ṭaraqama* 'to fill up, to stuff' (*vollstopfen*) and *garamama* 'to exercise a horse.'

Other noteworthy cases are the following:

zawatara 'to continue, go on,' in which the relative *za* has become part of the stem.

baratâ 'to be firm, strong,' in which the preposition *ba* has become part of the stem.

Praetorius further mentions similar formations in Ethiopic, such as *la'âla* 'to be high,' from *la* + עַל.

Also *baḫata* and *bāḫtawa* 'to be alone,' from *ba* + *'aḫatī.*

For a very complicated case of this kind see Praetorius, Amharische Sprache, §208a, b, c, d.[1]

In an early stage of the language the verbal infinitive of *hēda* 'to go' united with the auxiliary verb *'ala* 'to be' and the union became fixed both in form and in meaning. At a later period, by a "false analogy" this form, the result of this union, was considered a normal homogeneous verbal stem, and received further modifications, so that its origin was much obscured.

The verbal inf. of *hēda*, which at present, in accordance with the regular process of contraction in Amharic, is *hīdō*, was formerly *haydō*. This older form *haydō* united with a following *'ala*, and formed, not *haydwāl*, which the later phonetic law would require, but *haydōla*, in accordance with an older law still prevalent in Tigriña (see Praet. Tigriña Grammar, §48, p. 69), and which accordingly we must postulate for the older period of the Amharic.

haydōla then meant 'he has gone, he has left, he is not here.' But in course of time the original meaning of the verbal stem 'to go' was lost sight of, and the negative element, from being merely secondary, came to be regarded as the primary sense; and so the initial *hay* was regarded as a sort of negative particle. Then, in accordance with the analogy of the initial syllable of the negative form of the imperfect, *hay* became *'ay*, and finally the negative *m* was attached, *'aydōlam* 'he is not.'

Since, then, the first part of this form, viz. *'aydō*, had lost its original character as a verbal infinitive, it had to lose at the same time the ability to make its suffix correspond to its subject, and so it became fixed in the form of the 3d pers. masculine singular.

The form *'aydōlam* had the appearance of a negative imperfect of a stem *dōla*, only the final *ă* gave it the character of a perfect form. And since the endings of the perfect were assumed for all the different persons and numbers, the form of the 3d pers. pl. *'aydōlūm*, although having exactly the appearance of a negative imperfect, was not able to transfer the whole inflection to the imperfect, even though such a transfer was favored by the change of the initial *hay* to *'ay*. Also the circumstance that the form with the relative is *yăydōla* 'who is not,' and not *yamăydōla*, shows clearly that the form was regarded as a perfect. In this way it

[1] See also Praetorius' Beiträge zur äthiopischen Grammatik und Etymologie, in Vol. I of Beiträge zur Assyriologie, especially §§1, 2, 6, 52.

came to pass that this old compound verbal infinitive was inflected in a mongrel way, in its initial part having the appearance of a negative 3d pers. imperft., and in its final part having the appearance of a perfect.

These mongrel forms again have resulted in further analogical formations. Being regarded as pure imperfects 3d pers. masc. sing. they received the usual pronominal object suffixes, meaning: 'it does not belong to us,' or 'you or thee it is not appointed to,' etc. Then from this the reflexive *tadōla* 'to be appointed, assigned,' was formed, and even the simple *dōla imposuit* seems to have been used, though Praetorius says he never found it in any text.

Similar cases are found in Tigriña. See Praetorius, Tigriña Sprache, §173.

The reflexive prefix *ta* is regarded as part of the stem, and from the stem thus augmented a new causative is formed by prefixing *'a*.

See the examples given in Praetorius, Tigriña Sprache, §173.

The Mandean instances of this kind of analogical formations are given in Nöldeke's Grammar, p. 84, §74, p. 98, §87. The Arabic form *asnata*, denominative from *sane*, *sánat*, 'evil year,' in which the feminine ending *t* is regarded as part of the stem.

In modern Syriac many verbs with ܢ as a fourth stem-consonant are denominatives from nouns which have been formed by adding the suffix *ân* to a tri-consonantal stem. The instances are given in Nöld., Neusyrische Sprache, p. 192, §95. In other quadriliterals the first stem-consonant was originally a formative element which afterwards came to be treated as part of the stem. Such are many beginning with ש and ס, such as סחלפ 'to change,' and סחבר 'to visit,' etc.; others beginning with ת, such as תרתח 'to be boiled in pieces'; others beginning with מ, such as מפלט 'to take out.' See the cases cited in Nöld. op. cit. p. 194, §96. Some of these, formed from verbs with weak stem-consonants, have the appearance of original tri-consonantal stems.

So the causatives from stems פ״א and פ״ע and ע״ו; also from stems mediae ע.

See examples given in Nöld. op. cit. p. 228, §108; p. 235, §110. Also p. 243, §113; p. 245, §113.

Finally, we have under this class the somewhat analogous case where, not the formative element, but a consonant which is the result of a phonetic modification is treated as part of the original stem. See an illustration given by Haupt in Hebraica I 226.

The Assyrian *ittu* 'side' is the feminine of *idu* 'hand,' and stands for *idtu*. The plural of *idtu* is *idati*, but sometimes it is formed from *ittu*, and gives us *itâti*.

So also the construct *aran* 'sin,' from *arnu*, which is a phonetic modification of *annu* (resolution of the doubling by insertion of ר) is such an analogical formation. See Hebraica I, p. 219, note 1.[1]

CLASS III.

Division B.

Mistaking a stem-consonant for a servile or formative element.

We find examples of this kind in Syriac in words in which the stem-consonant ת is regarded as the sign of the feminine.

See the examples cited in Nöldeke, Syriac Grammar, §86. Also in §71, 1, וּמָּנָיָא *τεχνῖτις* and מִסְכֵּנָיָא *πτωχή*, the נ of the ending is a stem-consonant, but is treated as though it were a formative element.

The Ethiopic *bĕḫtĕw*, *solus solitarius*, becomes in Tigriña *bĕḫtû*. The final *u*, however, was misunderstood and regarded as the suffix of the 3d pers. sing. masc. and the word was thought to mean 'he alone.' Hence the other corresponding suffixes were added to denote the other persons, genders and numbers.

bĕḫtâ 'she alone,' etc. (Praetorius, Tigriña Sprache, §121, 37).

CLASS III.

Division C.

Analogical changes in the formative elements themselves. Influence of one formative element upon another.

The analogical changes which take place in the afformatives of the perfect in the inflection of the Semitic verb have been so thoroughly set forth by Nöldeke in an article entitled "Die Endungen des Perfects," in ZDMG 38, 407 fg., that the changes and formations need only be briefly noticed here, referring to that article for a discussion of the whole question.

In Syriac we have the 3d person plural ending *-ûn* for *-û* of the other languages, after the analogy of the other plural endings. So also in Assyrian we have in the permansive for *kašdû* sometimes *kašdûni*.

In Arabic the 3d pers. plural feminine *qatalna*, in place of the common Semitic form *qatalâ*, shows the influence of the corres-

[1] Cf., however, Zimmern, Babyl. Busspsalmen (Leipzig, 1885), p. 12, 6.

ponding form of the imperfect, *ịaqtulna* (see Dr. Martin Schultze, "Zur Formenlehre des sem. Verbs," p. 18, §15).

In the 2d person singular masculine the Ethiopic has *-ka* for the common Semitic form *-tâ*. Nöldeke explains this as due to the influence of the analogy of the possessive and object suffix of the same person.

It is better, however, to regard it as the influence of the original ending of the 1st person sing. *-kû*, which has been preserved in Ethiopic, and which in that language has changed the endings of the 2d person masculine and feminine from *-tâ* and *-tî* to *-ka* and *-kî*, while in the other languages the reverse has taken place, viz. *-kû* of the first person was changed to *-tû* under the influence of the analogy of the 2d person, while in Hebrew a further analogical change took place, *tû* being changed to *tî* under the influence of the possessive suffix *i*. (See Haupt, SFG 52, note 10; Stade, §179a; Hommel, Semiten, 443, note.)

In the 3d person plural masculine the Syriac forms in *-û* before suffixes are formed after the analogy of the imperfect forms in *-ûn* and *-ôn*, which retain their original *-û* before suffixes.

In the 2d person plural feminine the vowel *-u* of the Arabic ending *-tunna* is probably after the analogy of the same vowel in the corresponding masculine ending.

So in Ethiopic the pronominal suffix 3d pl. fem. *hōn* is probably after the analogy of the masculine *hômu*.

In the 1st pers. plural the Hebrew *-nû* for the common Semitic ending *-nâ* is probably due to the influence of *-nû* in אֲנַחְנוּ.

הֵמָּה as pronominal suffix is a late analogical formation and is found only with prepositions בָּהֵמָּה, מֵהֵמָּה (Stade, §348).

So מִינֵהֶם Gen. I. 21 is based on the analogy of מִינֵהוּ.

As to the analogical changes in the preformative of the imperfect Qal I shall not attempt to discuss them here. See some remarks on this subject by Haupt in Beiträge zur Assyriologie, Vol. I, p. 17, note 20; also pp. 260, n. 27, and 328.

Other instances where one formative element has influenced another are the following:

The vowel of the preformative of the Hiphîl participle in מֵקִים (stem קוּם) and מֵסֵב (stem סבב) is influenced by the vowel of the preformative of the perfect הֵקִים and הֵסֵב.

According to Stade (§161b) the ה of the preformative of the Hebrew reflexive in הִתְקַטֵּל as compared with the more primitive form *'it*, is due to the influence of the ה preformative of the causative.

But the question then arises: to what is the ה preformative of the causative due, when in Arabic we have *áqtala* and in Ethiopic *'agbára*?

The form of the ending of the imperfect plural feminine of verbs ע״ע and ע״ו has probably been influenced by the corresponding forms of the ל״ה verbs.

Thus תְּסֻבֶּינָה (stem סבב) after the analogy of תַּעֲלֶינָה (stem עלה 'to go up.')

The organic form appears in תְּשֻׁבְןָ (stem שׁוּב 'to turn.')

The form of the preformative of the perfect Hophal of verbs ע״ע and ע״ו has been influenced by the analogy of the same preformatives of verbs פ״ו. הוּקַם, stem קוּם, and הוּחַל, stem חלל 'to pierce, to begin' after the analogy of הוּרַד, stem ירד, for ורד 'to go down.'

A case of this class is cited by Dr. Rosenberg in "Das aramäische Verbum im babylonischen Talmud," p. 40.

In the Ethpeel of verbs פ״י, the י loses its consonantal power in most of the forms, and consequently the ת of the preformative remains. But in cases where the י retains its consonantal power the ת ought not to remain. If it does remain, it is due to the influence of the analogy of those cases where the י loses its consonantal power. In the *Ethpaal* the organic formation is usually found.

Another case where the form of one preformative has analogically changed the form of another preformative is the following, taken from Barth, Nominalbildung. The infinitive absolute (Barth, perfect infinitive) of the Niphal appears in Hebrew in three forms: נִקְטֹל, הִקָּטֹל, and הִקָּטֵל. Of these the first is the normal form. The other two are explained by Barth (Nominalbildung, p. 72, §49b) as analogical formations based on the analogy of the form of the infinitive absolute in the other derived conjugations, especially in the Piel and Hiphil. In these conjugations there was a certain similarity in sound between the infinitive absolute and the imperfect very noticeable when the infinitive was used to strengthen the imperfect; cf. Ex. 23, 24 שַׁבֵּר תְּשַׁבֵּר. Hence this infinitive was supposed to have been formed from the imperfect, when in reality it was formed from the perfect. In the Niphal no such resemblance existed between the imperfect and the infinitive as formed from the perfect, and hence a new form was formed from the imperfect which should have the same assonance to the imperfect as was observed in the case of the infinitive absolute of the

Piel and Hiphil. The ground of this explanation is strengthened by the fact that this analogical formation is found only when the infinitive absolute is used to strengthen the imperfect. Where it is used to strengthen the perfect the normal form is used; cf. on the one hand הֵאָסֹף יֵאָסֵף, on the other hand נִכְסֹף נִכְסַפְתָּה Gen. 31. 30.

In forms like הֵאָסֹף the vowel of the last syllable is due to the influence of the old perfect infinitive of the Qal and Niphal. קָטוֹל, נִכְסֹף, while in הִכָּרֵת the assonance to the imperfect has been made complete; cf. הִמָּלֵט אִמָּלֵט, 1 Sam. 27. 1, 'escaping, I shall escape.'

Class III.

Division D.

Inorganic application of formative elements under the influence of analogy.

The true origin, nature or significance of a formative element was often misconceived, and so it came to be attached to forms where it was not organically legitimate.

An instance of this class is given by Nöldeke, Syriac Grammar, §50B: "The ܝ which was often found apparently without any special reason, came finally to be attached to words ending in a consonant"; cf. Hebraica II 104, n. 1.

We have another instance in the use of the old accusative singular ending *â* ָה (accusative of direction) with לְ, בְּ and מִן, and in cases where it is attached to dual and plural forms, thus:

לְמַעְלָה 'upwards,' לְמַטָּה 'downward.'
כַּשְׂדִּימָה 'to Chaldea.'
הַשָּׁמַיְמָה 'to Heaven.'
מִצְרַיְמָה 'to Egypt.'
מִבָּבֶלָה 'from Babylon.'

Sometimes there is a combination of two processes B and D of this class. The language mistakes a stem-consonant in a certain form for a formative element and then adds it where it does not belong.

So in the forms of Syriac numerals with determining suffixes (Nöldeke, §149).

The ܝ which there appears is organic only in תְּרֵין 'we two.' After this analogy we have the other forms תְּלָתַיְהוֹן 'they three,' etc.

In Ethiopic the pronominal form 3d pers. masc. sing. *wĕ'ĕtū*,

forms the 3d person plural masc. and fem. *wĕ'ĕtômû* and *wĕ'ĕtôn* by the inorganic attachment of the suffixes *-ômû* and *-ôn* (Praetorius, Eth. Gramm. §21).

Another case of the same kind in Ethiopic is the attachment of suffixes to *kĕl'ê* when used as a numeral. These forms *kĕlĕ'êtû́*, *kĕlĕ'ếtŭ*, *kĕlĕ'êtî* and *kĕlĕ'ḗtă*, masculine, fem., nominative and accusative respectively, are based on the analogy of other numerals with suffixes (Praetorius, §135).

Still another case is found in the forms of prepositions with suffixes. The prepositions אֶל 'to,' עַד 'unto,' and עַל 'over,' are to be referred to the stems אלי, עדי, and עלי (see Stade, §375). Hence with suffixes we have the organic forms אֵלֶיךָ, אֵלָיו, עָדֶיךָ, etc. But the language mistook this ' for a formative element, forming the plural, and then added it to the prepositions where it had no place at all. אַחֲרֶיךָ 'after thee,' תַּחְתֶּיךָ 'under thee,'' בֵּינֵינוּ 'between us,' בַּעֲדֵינוּ 'among us.'

Cf. Barth, Vergleichende Studien, ZDMG 42, 348–358, where also the views of Lagarde, Mittheilungen I 232 are successfully combatted.

So too in Ethiopic all the prepositions receive their suffixes with the insertion of the long vowel *ê* (see Praetorius, Ethiopic Grammar, §152). This vowel is organic only in *lắ'lă* 'upon,' with suffixes (cf. Syr. עַל=לְעֵל, stem עלי). But the language mistook it for a formative element and then applied it analogically in the case of the other prepositions.

Another case of this class is found in the form of the feminine plural before suffixes in Hebrew, e. g. סוּסוֹתֵינוּ. Losing sight of the fact that the ' was organic only in the masculine סוּסֵינ, and that the fem. pl. construct was already expressed by the ending וֹת, the language adding the ending ֵי through the influence of the masculine.

On this subject compare the remarks of Praetorius, Tigriña Sprache, §99, the substance of which I quote as follows:

In several ancient and modern Semitic dialects the pronominal suffixes are found partially or wholly in combination or even union with a nominal plural ending. The languages presenting this phenomenon are Hebrew, Aramean, Modern Syriac, Mandean, Amharic, and Tigriña. The similar occurrence, however, of this peculiarity in these six languages is purely external and accidental. There are three different grounds and occasions of this confusion of plural ending and pronominal suffix which

are still to be distinguished in its occurrence in the different languages. In modern Syriac and Mandean the plural nature of the nominal plural ending was entirely forgotten and abandoned.

See Nöldeke, Mand. Grammar, §76 and §141. The possessive suffix pronouns have incorporated the ending *ai*, which originally served as the ending of the construct masc. pl. The result is that in the case of masculine nouns with pronominal suffixes the singular and plural can no longer be distinguished. The same thing is true in modern Syriac. See Nöldeke, Modern Syriac Grammar, §37.

In Hebrew and Aramean, however, a knowledge of the plural nature of ׳ was retained, in spite of its erroneous application. This is sufficiently shown in the fact that besides its legitimate application in the masculine, it is found only in the plural of the feminine. So also in Tigriña and Amharic the meaning of the plural ending in combination with a suffix was not forgotten. When, however, we find, in Tigriña, cases where the singular has the suffix *-ătkŭm* or *-âtôm* instead of and alongside of the simple *-kûm* and *-ôm*, this must be because the plural ending *-ât* was thought to denote not only the plural nature of the noun to which it was suffixed, and which was its original function, but also the plural nature of the following pronominal suffix. The ending *-ăt*, therefore, is capable of a two-fold reference—either to the preceding noun, which is legitimate, or to the following pronominal suffix, where it is not legitimate.

As a result of this confusion *kăhenătkŭm*, for instance, may mean either 'your priest,' or 'your priests.'

Sometimes there is a misapprehension of the nature and origin of the formative elements of a word. See Dr. Martin Schultze, Zur Formenlehre des semit. Verbs, p. 28, §29. He there points out that the Syriac interjectional *n* and the Biblical-Aramean prepositional ל of 3d person sing. imperf. came to be regarded as the pronominal prefix of the 3d person, and as such was prefixed to the plural as well as to the singular.

Before Schultze, however (1886), Mr. W. H. Salter Brooks (1883), in the appendix to his treatise "Vestiges of the Broken Plural in Hebrew," pointed out that the Syriac form with *n* belonged originally only to the singular, and was afterward applied analogically to the plural forms. He says nothing, however, as to the original nature of this *n*.

Another note on the prefix ל and ן of the 3d person impft. in Aramean and Syriac respectively.

As to the Aramean, see the remarks of Kautsch, Grammar, p. 79. The ל was originally the sign of the optative or precative (compare Assyrian precative particle *lû*). Afterwards its original signification was lost and it was applied indiscriminately.[1]

Compare the examples cited by Dr. Rosenberg, "Das aramäische Verbum im babylonischen Talmud," Marburg, 1888. Dr. Rosenberg says: "ל is prefixed after the example of the Assyrian, where in the same relations the particle *lu* is used, to strengthen the assertion. Gradually its force weakened until it became simple assertion and took the place of the prefix י. Because of its relationship with נ, however, it changed into the same, and this new form became the exclusive one in Syriac, in Mandean with few exceptions, and in Talmudic was used pretty often."

According to Nöldeke, in Lazarus and Steinthal, Zeitschrift für Völkerpsychologie und Sprachwissenschaft, Vol. VII, pp. 403–411 the dual originally denoted a pair (*die paarweise Verbindung*). This signification is still retained in Hebrew. In Arabic, however, it came to mean simply twoness, and extended itself to all the inflected parts of speech. If this could be maintained it would be an interesting case of the analogical extension of an inflectional element beyond its original bounds.

In a review of this article, however, by Dr. Friedrich Müller, "Der Dual in den semitischen Sprachen," Wien, 1875, this position is questioned, and the counter-position maintained, that the Arabic dual form of the verb, *qatalâ*, is the original. Friedrich Müller endeavors to support the position by a comparison with the Assyrian (p. 8). This must be abandoned, however, as the Assyrian form cited is now known to be, not a dual, but the feminine plural.[2] We need not now examine the details of his argument. On the whole, his reasoning is unsatisfactory, and I do not accept his conclusion (p. 12 and p. 14) that the Arabic dual, in its form and in the extent of its application, represents most faithfully the condition of the parent Semitic in this respect. The position of Nöldeke seems to be the correct one.

A case of misconception of the nature and significance of an inflectional ending and consequent misapplication is given in Nöld. Neusyrisch. Gramm. p. 218, §102, the use of the ending *-nî*, which should be used only in the plural, to form the 3d person sing.

[1] Cf. Haupt, Beitr. z. Assyriologie, I 17.

[2] See, however, Haupt, SFG 71, and ZDMG 34.

A similar case is the indiscriminate use of the old Ethiopic *Abûna* or *Abûn* in modern Amharic as the title of a bishop or a saint (see Praetorius, Amharische Sprache, §76b).

For another case of this class see Praetorius, Tigriña Sprache, §131. The plural ending *-ât*, which originally was the ending of the feminine plural, has in many cases taken the place of the original masculine ending *-ân*, especially in the case of adjectives and participles.

For the same phenomenon in Tigre compare Schreiber, Manuel de la langue Tigraï, §63. In this connection we must bear in mind, however, that the presumption is that in primitive times the plural endings *-îm* or *-în* or *-ân*, on the one hand, and *-ât* on the other, were applied more indiscriminately without regard to gender; compare e. g. אָבוֹת and נָשִׁים. See Barth, Vergleichende Studien, ZDMG 41, 613, 614.

In studying the plurals formed by the insertion of *h* (see Nöldeke, Proc. of the Berlin Acad. 1882, 1178–9; Barth, Vergleichende Studien, ZDMG 41, 621 fg.), we find some instances in which it is inserted probably after the analogy of other older and more original cases. Thus Arabic *ummahât* 'mothers' probably after the analogy of an older form *abahât* 'fathers'; cf. the Sabean אבהתי and the Syriac אַבָהָתָא (cf. Hebrew אַמָּהוֹת 'handmaids') is not therefore a *late* form. On the contrary it is primitive Semitic. See Barth, ZDMG 41, 624, note 2.

In Aramaic (Syriac) the *h* was originally inserted only before the ending *-âtha*. The few cases in which it has been inserted before the ending *-în (ê)* such as אַבָהֵא (cf. Sab. אבהי, const. pl.), חַמָהֵא 'father-in-law,' שְׁמָהֵא 'name,' are probably of a secondary nature and formed after the analogy of forms in *-âtha*, חַמָהָתָא ,אַבָהָתָא.

The *h* arose from an original *w* because of dissimilation. In almost all cases where we find the original stem consonant *w* changed into *h* in the plural, we find that it immediately follows a labial. Hence the labial spirant *w* was changed to the guttural spirant *h*.

[1] See also E. Nestle's paper on *El*, *Elohim*, *Eloah* in Theol. Studien aus Würtemberg, III. Jahrg. (1882), pp. 249 and 255. According to Nestle אלהים is plural to אל and the singular אלוה a secondary analogical derivation from אלהים. This view is not accepted by Delitzsch, however. See Del., Neuer Comm. über die Gen., Leipzig, 1887, p. 47.

[2] The supposition of Stade, §182, that the insertion of the ה is to give bi-consonantal stems the appearance of tri-consonantalism cannot be maintained. See Barth, ZDMG 41, 625.

Cases where a labial does not precede are hence to be considered analogical formations. They are comparatively rare, and the different forms appear respectively in only one language; so Arab. *sanahât*, Phoenician דלהות.

An interesting and valuable discussion of some analogical formations of this class is given by Barth, ZDMG 42, 341–358.

I shall give only the summary of his views, referring to the article itself for the details.

The words for ***heaven***, *water*, *life*, *entrails*, *face*, *value*, in the several North-Semitic languages have the plural form, while the corresponding forms in South-Semitic are generally singular. Cf. Heb. שָׁמַיִם, Phoen. שמם, Syr. שְׁמַיָּא, שְׁמַיִן, Psalm. שמין, with the Arabic *samâ'*, Sabean סמו, Ethiopic and Amharic *samâị*.

Heb. מַיִם, Syriac מַיָּא, מַיִן, with Arab. *mâ'*, Eth. and Amh. *mâi*.

Heb. חַיִּים, Syr. חַיֵּא, חַיִּין, Arab. *haịât*.

Hebrew (late, Mishna) מעיים or מעים, Arab. *mi'aⁿ* or *mi'â'*.

Hebrew פָּנִים.

Late Hebrew דמים, Aram. דְּמַיָּא.

Barth thus explains these plural forms which are found in Hebrew and other North-Semitic languages. They are all derived from stems ל״ו and ל״י. In the case of the words for *heaven* and *water* the original forms were probably *šamâị* and *mâị*. These were shortened to *šamăị* and *măị*, thus exactly resembling the usual construct. pl. masc. Also when these forms received suffixes they presented the same appearance as the plural with suffix. Hence the language mistook the form for a plural, and formed the corresponding plural absolute שָׁמַיִם and מַיִם.

In the same manner, from the forms with suffixes, מֵעֶיךָ, חַיֶּיךָ, דָּמָיו, לְפָנַי, which, although really singulars, looked like plurals, were formed the absolute plurals חַיִּים, מעיים, פָּנִים, דמים.

So perhaps also Bibl. Aram. חֲדִין 'breast,' and Hebrew דָמִים 'blood-guiltiness.'

According to Barth (Nominalbildung, §123), the prefix *ma* of the Arabic passive participle of the first form is due to the influence of the analogy of the passive participles of the other forms. This is a case of the analogical extension and application of a formative element beyond its original bounds.

Sometimes analogical influence of this kind produces great mixtures of forms. Thus the Greek suffix -άριος is attached to genuine Syriac words (Nöldeke, §140, p. 77).

Here also may be classed such formations as are mentioned in Nöldeke's Mandean Grammar, p. 86 fg.

ächuun, *ächni* "we" forms *ächtun* "you," by inserting the *ch*, a contamination of form. Then, as from *ächtun* there was formed *ächtôchun* by the possessive suffix of the 2d pl., this again produced the formation *ächnôchun* for the first person.

HISTORICAL AND BIBLIOGRAPHICAL NOTE.

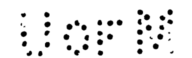
No systematic comprehensive treatment of analogy in the Semitic languages has yet appeared. In nearly all the recent treatises on the grammar, phonetics, and morphology of these languages frequent use is made of the principle of analogy to explain the different phonetic and morphological phenomena of these languages. So, for example, Bickell (Grundriss der hebräischen Grammatik, Leipzig, 1869), English translation, Outlines of Hebrew Grammar (Leipzig, 1877), on page 42, §47, notes the fact that "the remarkable transition of *i*, which has arisen from *a*, to *î* in the hiphil has perhaps originated according to an erroneous analogy from the conjugation of the verbs mediae *v*, *y*, where this *î* is phonetically legitimate."

And on page 49 of the same work he suggests that many Semitic stems which at present have three stem-consonants originally had only two such consonants, and were made tri-consonantal by the insertion of an auxiliary sound through a pervasive analogy.

Also in the following among many other passages of the same work he points out cases of the occurrence of analogy. On page 66, §86, he notes that after a false analogy the ending *ā*, to indicate direction, is added to a plural noun in the case of כַּשְׂדִּימָה 'unto Chaldea,' Ezek. 16. 29. On page 70, §93, it is observed that before suffixes the plural endings of the masculine are superadded after the feminine plural ending according to a false analogy peculiar to Hebrew; cf. סוּסֶיךָ 'thy horses,' and סוּסוֹתֶיךָ 'thy mares.'

On page 100, §136, it is observed that the feminine singular perfect of verbs *tertiae infirmae* (*galayat*, *galât*) is usually expanded to אָלְתָה after the analogy of strong verbs.

In "Die sumerischen Familiengesetze von Dr. Paul Haupt," Leipzig, 1879, we have many discriminating and valuable observations on the occurrence of analogy in Assyrian and also in the other Semitic languages.



See page 52, note 10, where it is pointed out that in Assyrian *izzazû* (3d plur. pres. kal stem *nazâzu* 'to settle, to stand') instead of the organic form *inâzazu* is based on the analogy of *illakû* 'they go' (stem *alaku*), the analogy being induced by the form of the imperfects *izzizû* and *illikû*. (On these forms cf., however, Del. Ass. Grammar, §100.)

In the same place it is also pointed out that Hebrew אָנֹכִי (grd-form *anaku*) and קָטַלְתִּי are based on the analogy of אֲנִי in the vocalization of .the final syllable for *anaku* and *qataltu*, while *qataltu* is for *qatalku* under the influence of the 2d person *qatalta* and *qatalti*.

Unfortunately the treatise which is there promised us on "Associative Neubildungen im Bereich des Semitischen" has not yet made its appearance.

On page 66, note 3, of this work it is pointed out that many forms of verbs פ״ו (Assyrian) such as *ušêbila* 'I brought,' *ušêšib* 'I placed,' *ušêṣû* 'they led out,' are based on the analogy of forms from stems פ״א.

On page 73 middle analogy is pointed out in the forms *muttâti* plural of *muttu* for *munâti*, similar to the analogy observed in the Hebrew forms דְּלָתוֹת, plural of דֶּלֶת 'door,' and קְשָׁתוֹת, plural of קֶשֶׁת 'bow.'

Two articles by the same author in the first volume of Hebraica (Assyrian Phonology and Wateh-ben-Hazael), as also several articles in the first number of Beiträge zur Assyriologie, Delitzsch und Haupt, Leipzig, 1889, contain much valuable material of the same kind which has been utilized for this present treatise.

In Stade's Hebrew Grammar, Leipzig, 1879, many individual cases of analogy are pointed out in the discussion of the various forms. The greater number of these cases are cited and arranged under their respective classes and divisions in the preceding part of this treatise.

On pages 110–114 of his grammar Stade treats of the various ways in which original bi-consonantal stems have become tri-consonantal under the influence of the analogy of those stems which originally had three stem-consonants.

For the rest the principal individual cases of analogy which he points out are those cases where a weak or irregular verb-stem is treated after the analogy of a strong stem, or where the different classes of weak verb-stems are confused, for instance, confusion of stems ל״ה and ל״א, §143e, note 1.

It is hardly necessary to say that in the excellent grammars of Theodor Nöldeke (Syrische Grammatik, Leipzig, 1880; Neusyrische Grammatik, Leipzig, 1868; Mandäische Grammatik, Halle, 1875) we have a comparatively full presentation of nearly all the analogical phenomena of the respective languages of which he treats. These different formations, as given by Nöldeke, will be found cited or referred to in the preceding pages of this thesis.

The same remarks to some extent apply also to the grammars of Kautzsch (Grammatik des Biblisch-aramäischen, Leipzig, 1884), Praetorius (Grammatik der Tigriña-Sprache, Halle, 1871; Die Amharische Sprache, 1879; Æthiopische Grammatik, Leipzig, 1886), and Delitzsch (Assyrische Grammatik, Berlin, 1889).

Considerable valuable material is also contained in various essays on different topics of comparative Semitic grammar recently published. See especially Nöldeke in ZDMG 37, 525, Die Verba ע׳י im Hebräischen; Vol. 38, 407, Die Endungen des Perfects; Barth, Die Nominalbildung in den semitischen Sprachen, Leipzig, 1889, also his Vergleichende Studien in ZDMG 41, 603; 42, 413; 43, 177. The material of these articles has been cited and discussed in this paper.

There is not much that is new in Wright's Comparative Grammar of the Semitic Languages, recently published (New York, 1890).



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